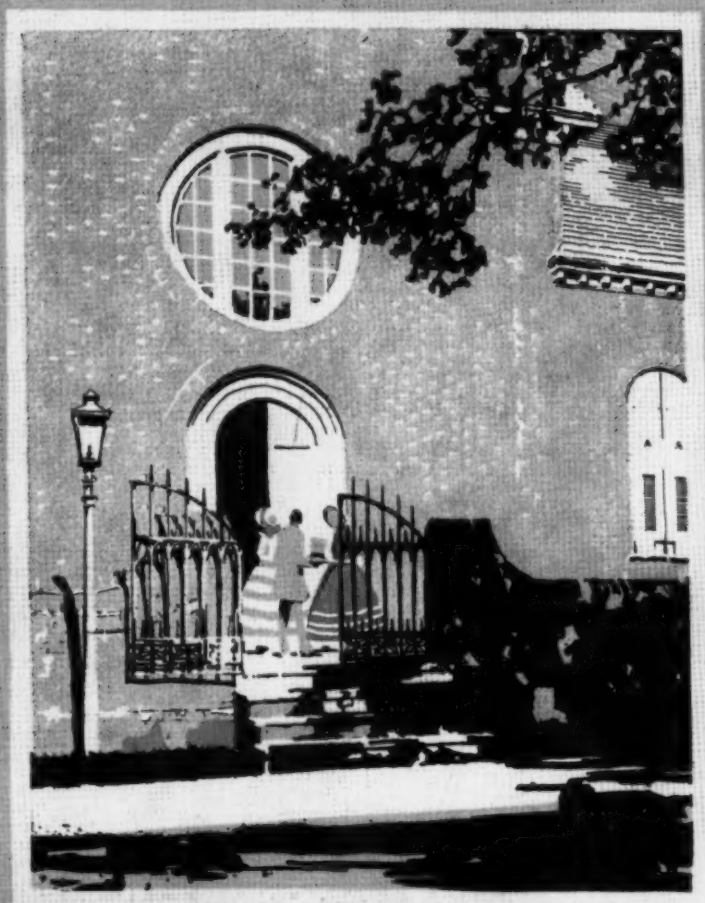


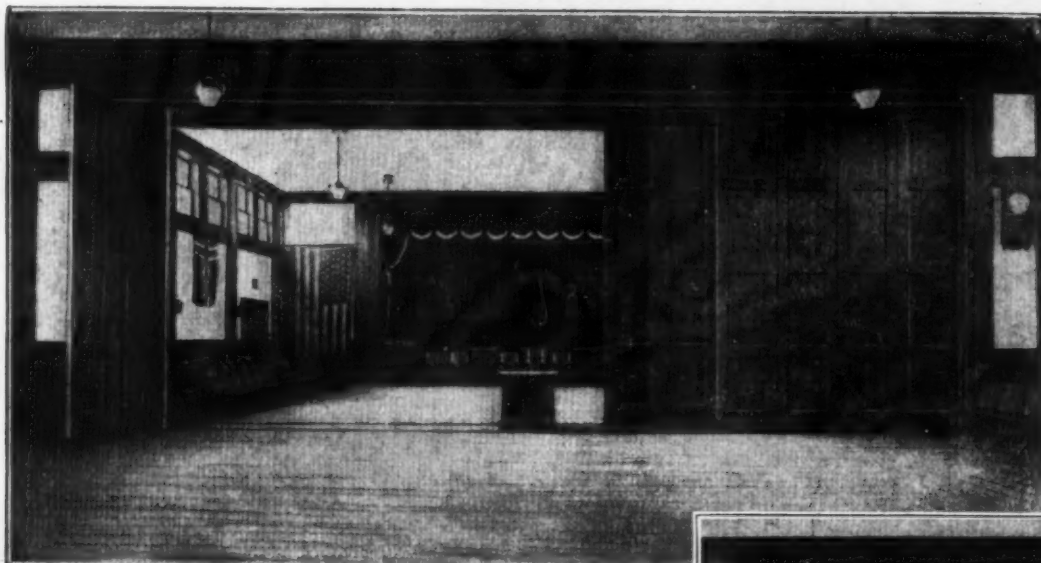
Architectural  
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# THE ARCHITECTURAL FORUM

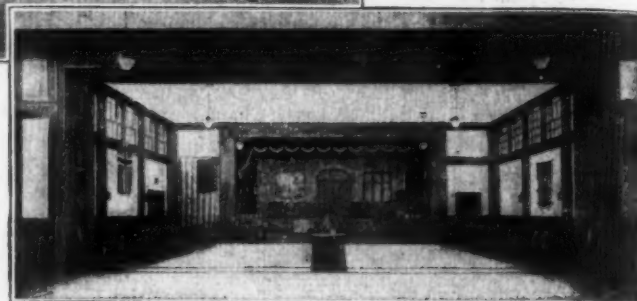


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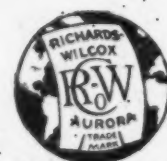
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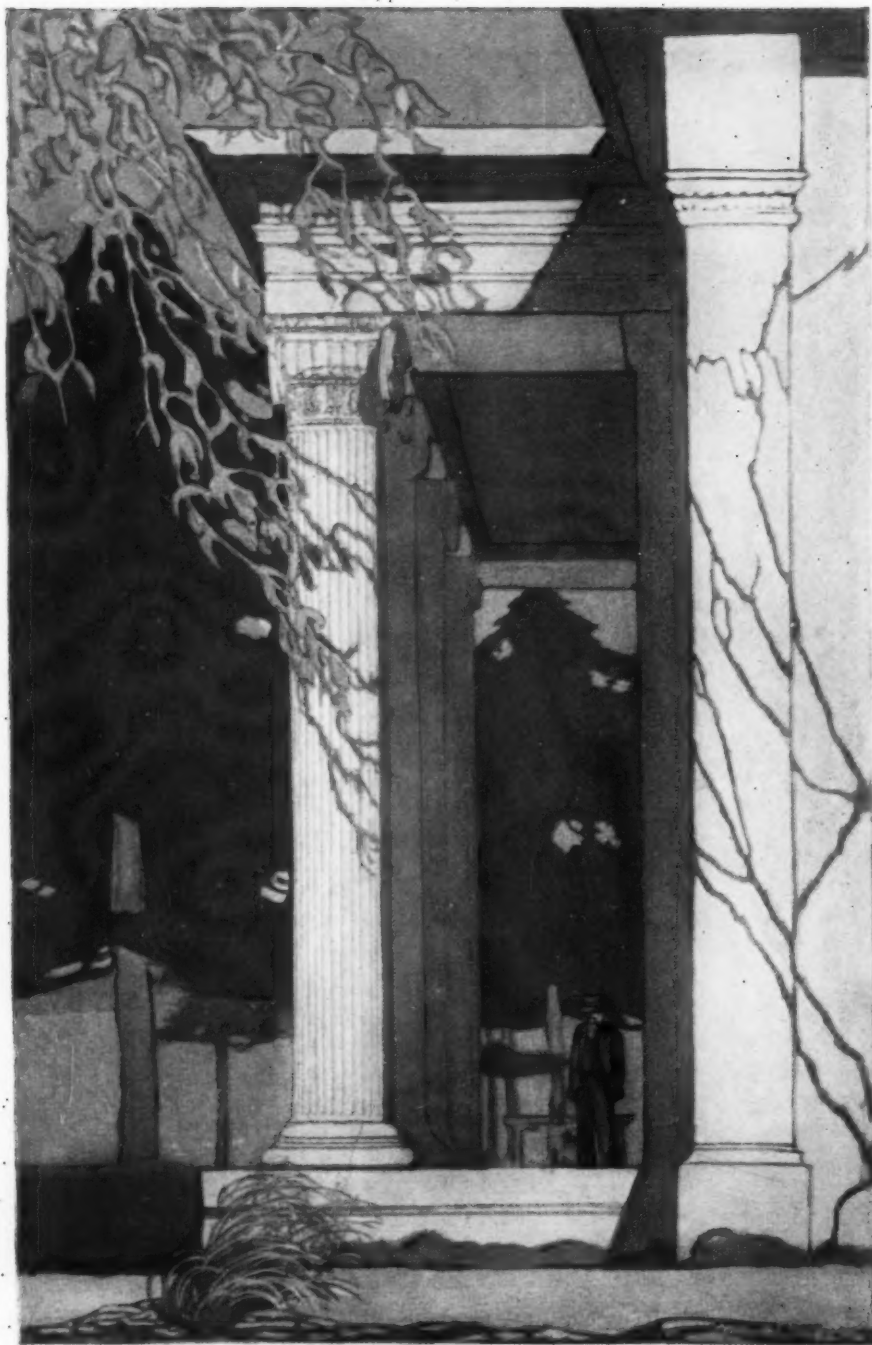
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Architecture





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From a Water Color Sketch by Norman C. Reeves

*The Architectural Forum*



# The ARCHITECTURAL FORUM

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Number 2

## The Maryland War Memorial, Baltimore

LAWRENCE HALL FOWLER, ARCHITECT

By JOHN H. SCARFF

ON November 11, 1920, the second anniversary of the signing of the Armistice, the Mayor of Baltimore approved an ordinance intended "to create a commission to determine upon and to erect a memorial within the state to the men and women of Maryland who gave their lives for their country in the military and naval service in the World War, and to commemorate the service of all other men and women who were engaged in the military or naval service in the War." The ordinance further provided that the commission should consist of seven members, authorized and empowered to act in conjunction with the similar committee previously appointed by the Governor.

The Memorial Commission of the State of Maryland and the Soldiers, Sailors and Marines Memorial Committee of Baltimore City, having been duly appointed, at a joint meeting agreed to act together as a joint commission for the erection of a memorial building. Following the advice of the Baltimore Chapter of the American Institute of Architects as to the advisable procedure for the conducting of a successful architectural competition, this joint commission selected as its architectural adviser Waddy B. Wood, of Washington, and instructed him to prepare a program for an architectural competition, and to assist and advise in its being carried out. The Commission selected to enter the competition 24 architectural firms of the State of Maryland, together with John Russell Pope, Henry Bacon, Cass Gilbert, Carrere & Hastings of New York, and Day & Klauder of Philadelphia. The jury of award, appointed by the Commission from its own members, consisted of E. Brook Lee and Hugh H. Young, representing the state, and Harry C. Jones and John R. King, representing the city, together with Paul Cret, Architect, University of Pennsylvania, Albert Lewis Harris, Architect, of the District of Columbia, and Edward A. Crane of the firm of Rankin, Kellogg & Crane, Architects, of Philadelphia. Such was its personnel.

Cost was an important factor in the competition. The published program set forth that no design of a building would be considered that in the opinion of the jury could not be built for \$900,000. No

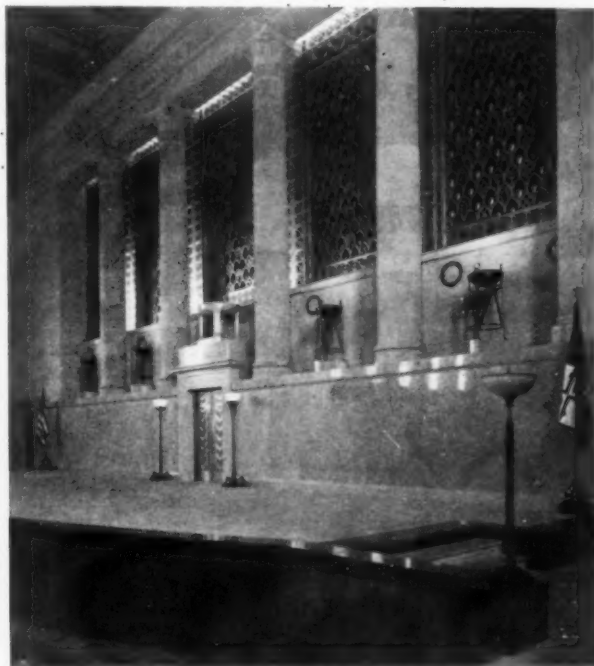
limit was put upon the cubage of the structure. The mandatory requirements of the program were: An auditorium or memorial hall "as large as compatible with the general scheme of the building"; a memorial lobby; general executive offices; one or two assembly rooms, and the various service departments, with the exception of the heating plant, which would be located in another city building. All these rooms were to be on two floors. Twenty designs were submitted to the jury of the Commission, and on October 17, 1921, by unanimous selection of the jury, the award was made to Lawrence Hall Fowler.

The site selected is near the business center of Baltimore, on the opposite side from the City Hall of a newly created open square. The building faces streets on the front and the two sides. A municipal office building is being placed behind, and facing away from the War Memorial. It is hoped that eventually the city will acquire all the property bordering this square, and that properly designed and related buildings will be placed entirely around this civic center. This is made all the more desirable because the width of the Memorial Building is considerably less than the distance between the streets bordering it, so that eventually it will count as a building within a large open area, at least two blocks long by one wide. The completed building was dedicated April 5, 1925, with appropriate ceremonies participated in by the officials of both the state and the city, various patriotic, military and naval organizations of the nation and state, and representatives of the different nations associated with the United States during the late War.

The Memorial is built of Indiana limestone, and is in plan a simple rectangle of 102 by 188 feet. The first floor is raised above the ground on a high base, and is treated with a Greek Doric order 49 feet high, the columns themselves being 39 feet high. On the main facade is a portico with six columns, and on the sides and rear are pilasters framing small windows high up in the wall. Above the order is a plain expanse of wall surmounted by a cornice and stone cresting. In the frieze around the building are carved the names of the 24 counties of Maryland, and on the architrave over the main entrance is



Stairway Down to Trophy Hall



Organ Screen in Auditorium

the motto of the state—"Fatti Maschi Parole Femine." Behind the columns is the dedicatory inscription:

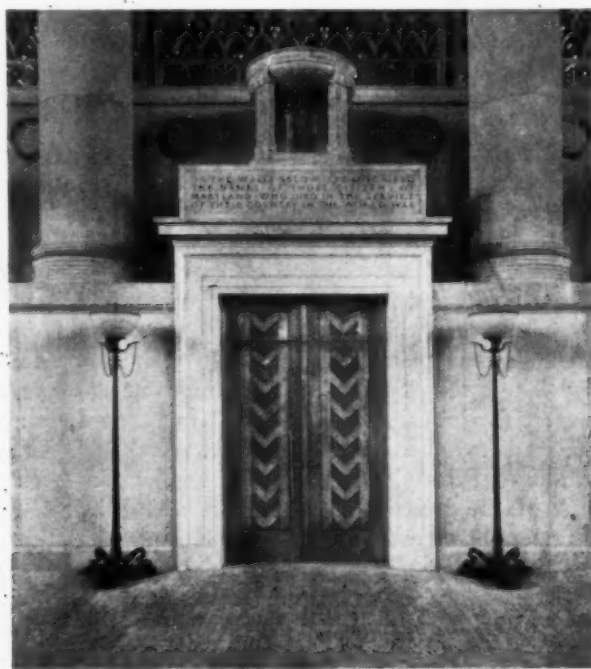
To the Citizens of Maryland  
Who Gave Their Lives  
And Service in the World War.  
By the State of  
Maryland  
and the City of Baltimore.

The space from the building line to the sidewalk is treated with steps, broad terraces, benches and planting placed on each side of the entrance portico.

Through the three entrance doors one passes directly into a vestibule, which is very effectively lined with Missouri porphyry in large slabs; both walls and ceiling. One then passes into the main auditorium, which takes up practically the whole of the first floor. A broad flight of stairs leads from directly opposite the center entrance to the trophy room on the lower floor, and from each side to the main auditorium at a higher level. At one end of this large and imposing room is the platform with an organ screen above and behind it, and at the other end a gallery. Around the entire room there



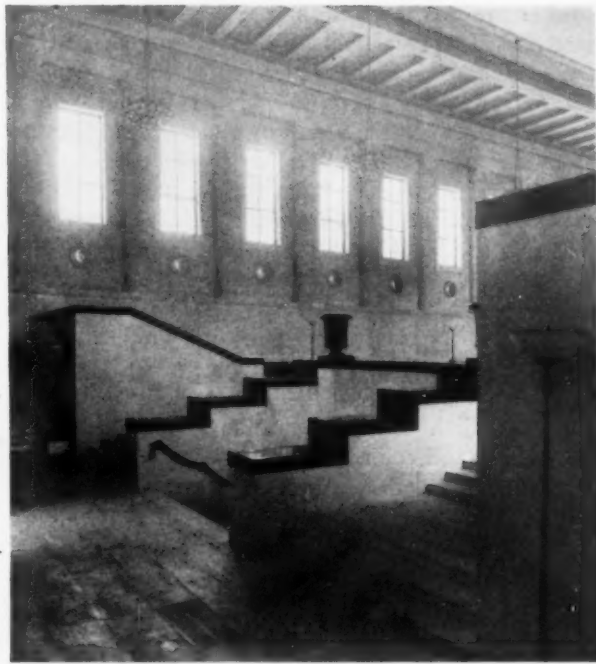
The Entrance Vestibule



Platform Doorway, Auditorium



Detail, End of Platform.



Entrance Stairs, Auditorium

extends a graceful and freely treated Corinthian order, raised on a high Tavarnelle base on which are to be cut the names of those Marylanders who lost their lives in the War. On the side, high up between the three-quarter columns, are beautiful leaded windows, glazed with slightly tinted glass. Under the windows in the square panels above the base are round shields bearing the insignia of the different divisions of the army, principally those in which there were Maryland troops. The central portion of the main floor is depressed about 2 feet below the outer edge along the walls. This raised portion

of the floor serves as a communicating passage from the front to the back of the hall. The ceiling is plaster, painted. The great central panel, as large as the central floor space, is plain sky blue, and that portion above the communicating passage is beamed and tinted in soft shades of terra cotta and gray.

Apart from the grace and distinguished dignity of the main auditorium, color is its principal charm. The walls are carried out in the warm shades of the Tavarnelle base. The ceiling is of exquisite blue with warm reds, grays and yellows. The leaded windows are greenish white, and the round decorative



Steps to Entrance Terrace



Stalls and Stairs, Auditorium



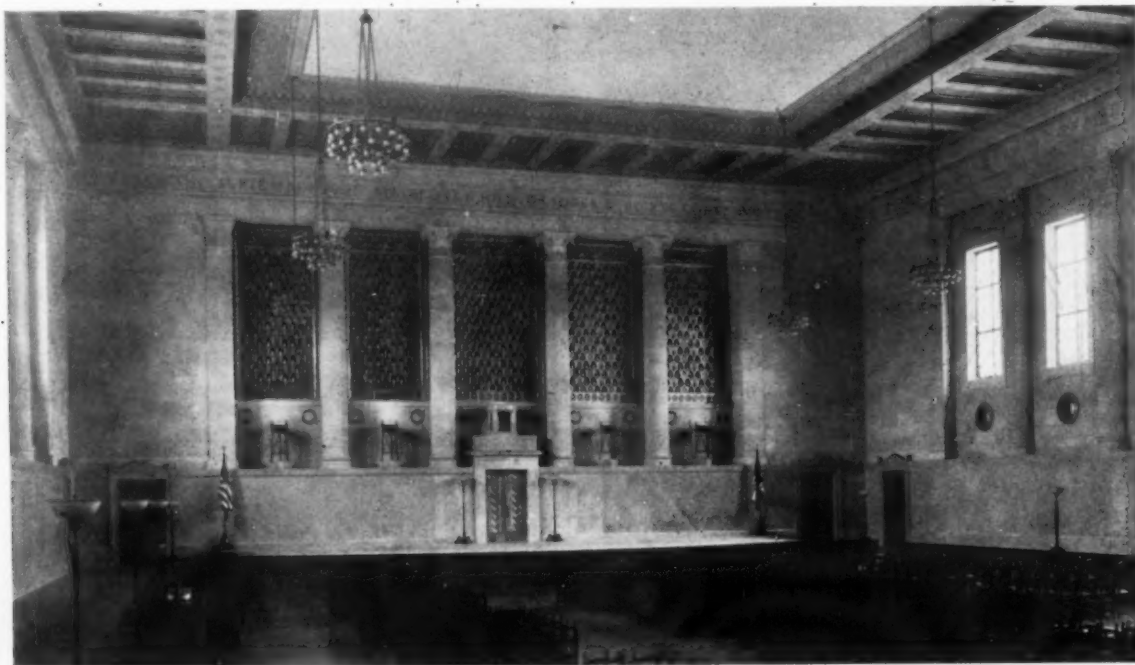
shields are pewter and pale gold,—like the organ screens. The rear wall of the gallery back of the free-standing columns repeats the terra-cotta of the ceiling. The floor is carried out in several shades of sea green terrazzo, and the parapet and stairs are capped with Belgian black marble. The room gains immensely from the fact that there are no fixed seats. Mr. Fowler, with his accustomed attention to detail, has designed beautiful benches in American gum, and simple cane-seated chairs are used when capacity seating is required. The entire room is marked by charm and simple dignity. The detail is carefully thought out, and although it preserves the spirit of Classic architecture, it is freely handled. Delightful color makes the whole room glow, and color has been used with the greatest skill to explain and accent form, and to give interest and unity to the whole design.

The room of the building second in importance is the large trophy room in the lower story, reached by a broad flight of steps from the auditorium, or directly from the street through side entrances. A Pompeian Ionic order surrounds the room and supports a simple beamed ceiling. The base of each column is a dark porphyry drum about one-third the height of the column. The plaster beams of the ceiling are decorated with simple panels picked out in primitive colors. Opening out of this hall, and separated from it only by one line of columns, is an assembly room capable of seating 300. The two rooms may be thrown together by opening a sliding partition behind the columns. The woodwork here, as in the rest of the building, is American gum. Filling in the four corners of the plan are several committee rooms or offices, which open into corridors running parallel to the long axis of the building. These small committee rooms, although

extremely simple, are by no means the least interesting part of the building. Mr. Fowler has painted the walls in the most delightful way, using bright but very simple colors,—blue-greens and yellows. The trim and bases are wood, and the floors are of terrazzo. The mechanical plant is located in the front portion of the ground floor under the entrance lobby, and a kitchen and pantries are in a basement.

The Memorial, both outside and inside, is marked by the most dignified simplicity,—on the outside by a simplicity that borders almost on the too severe. This was perhaps the result of the extreme importance in the architectural program placed upon cost. The architect, to soften the silhouette of the building, has placed upon the four corners *acroteria*; but the uncompromising mass of the building remains. If the present writer may be so bold in his criticism, he would say that the exterior treatment of the basement story is weak and inadequately suggests the strength necessary to support the building above, and the treatment of the order on the side wall is not sufficiently bold in scale to be properly related to the order of the portico and the heavy weight of the wall above. As for the interior, the parapets arranged around the combination of stairs immediately inside the main entrance seem unnecessarily high, and in one or two places the contrast of materials is not the happiest. The two black marble vases on the parapet serve a questionable end. Mr. Fowler hopes to see placed on the wall back of the columns in front of the gallery a mural painting.

Adverse criticism is given with but a sporting intent, and it in no way lessens the writer's sincere admiration of the fine spirit of the monument, which in its great effectiveness and beauty reflects great credit upon the state and city that made it possible, and upon the architect who brought it into being.



The Auditorium, Known as Memorial Hall

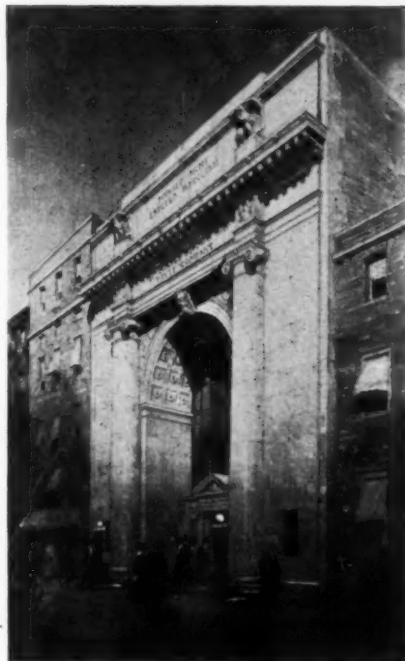
# Banks and Bank Buildings; Part I.

By ALFRED HOPKINS

A NEW building is the bank's best bid for business. This may not come with as much force from the architect as it should, because his function always credits him with the wish to promote that idea. But such is the fact, nevertheless, and to any banker who has gone through the ordeal of building with any degree of comfort, it remains indisputable. Not long ago a financier from abroad came to America and ridiculed the banks in the smaller cities, buildings—as he described them—which are stone and marble mausoleums. He wanted to know why it was done. The answer is simple and entirely adequate: because they bring business. If fake concerns can thrive luxuriantly for awhile in offices which give to the casual customer the impression of stability and integrity, why should not a legitimate business benefit in like surroundings? And the answer to that is the best of answers: that it does.

*The Lot.* But before we take up the building proper, there is one thing (with which the architect seldom has anything to do) that should have careful consideration, and that is the lot. A good location is just as necessary for the bank as for the merchant. The merchant has always been willing to pay for the right place to do business, because it brings him trade. The banker must set his mind to the same thing, and for the same reason; it is just as necessary for the one as for the other to be available to the public. The bank should acquire the best location possible and pay the price for it,—not only the best in point of situation, but also in point of area. I think it is safe to say that nine out of ten banks build too small. My experience, as one who has come in contact with many such problems, is that the average banker when he completes his new structure feels that he is secure for 20 years. At the end of five, we find he has entirely outgrown his quarters, and is probably already holding secret conversations with John Doe about acquiring the adjoining property. Get a good lot, and forget its extra cost. It will prove true economy in the end.

Now as for sizes; 50 feet in width will suffice, though 54 or 56 is very much better. The few extra feet may be put into the public lobby, and nowhere is space more useful than it is there. Then



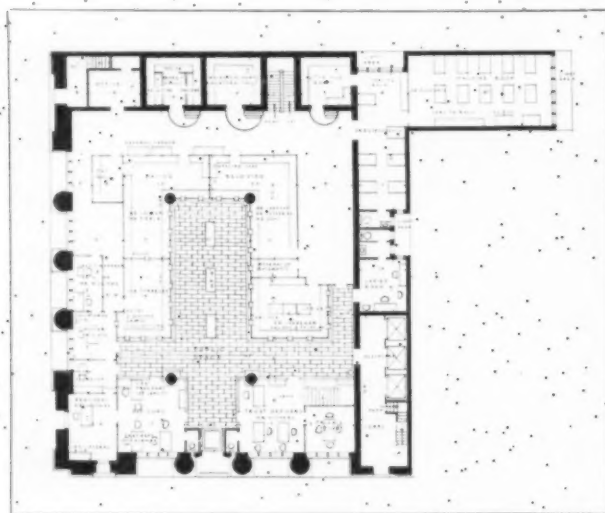
Savings Deposit Bank & Trust Co.,  
Elyria, N. Y.

Alfred Hopkins, Architect

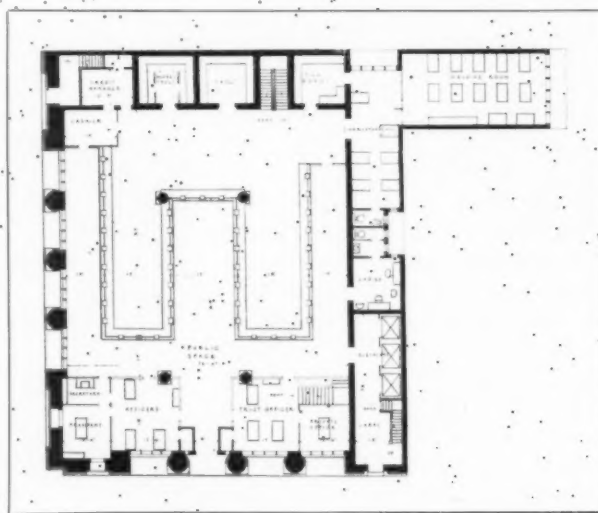
for property depth, 100 or 150 feet, for it is always desirable to have available area at the rear. In a width of 56 feet a single expansion of the screen can be made. Generally there is not the urgent necessity for a width greater than this, up to 70 or 75 feet. In 70 feet or over a double expansion of the screen may be made, and a lot this wide need not be proportionately so deep. But a wide lot is always an advantage. From the very inception of the plan, the possibility of future expansion should be had in mind. It is a matter of importance.

*Expansion.* We have said that from the very inception of the plan the possibility of future expansion should be made certain. While the various plans will show how this may be done, by the rearrangement of the screen, officers' quarters, work space, etc., there

is one general principle involved which it is well to keep in mind at the start,—that the bank's growth will be through its contact with the public on the first floor, and that there will never be too much area available there. Consequently, any department which can go into the basement should be put there, and among the first things to be relegated to this location are the vaults. The bankers in the smaller cities have been a little reluctant to accept this view, and as a result we usually find the vaults in the very center of things on the banking floors,—of course with the great doors as an important advertising asset. This is all very well for a few years, but usually having such an arrangement is a great mistake. There is nothing which so complicates future expansion on the main floor as the safe deposit vault, and particularly in a central location. With the safe deposit vault in the basement there is more space to provide the necessary accommodations in the way of coupon booths, consultation rooms, etc. A larger vault may be constructed in the basement and expansion for the safe deposit department provided, which is just as important as expansion anywhere else. With the increased area available, a vault for trunk and silver storage may be had. This is coming to be more and more a service which the bank gives its customers, and in some localities it is one of the essentials of the safe deposit department,—and I have no doubt that providing cold storage will some day be one of the



First Floor Plan—27 Wickets



Expansion of First Floor Plan—42 Wickets

The Mechanics' National Bank, Trenton, N. J.  
Alfred Hopkins, Architect

regular features of this service. The basement is also an excellent location for the women's room, much better than the first floor, where it has been the custom to place it. There is a relation between the trust department and the vault, where its securities are kept, that makes the basement available for that purpose, either in the first instance or as a result of necessary expansion. Public conference rooms are appropriately placed in the basement, and in some communities they are a valued accommodation to the bank's clients. The bank having a large foreign department always finds the basement available for it. But the essential thing to get off the main floor is the vault. With that in the basement, the whole task of arranging the plan has been greatly simplified. Expansion may now be provided, and the best type of plan determined.

*Types of Plan.* A few years ago there was some controversy as to which was the best of the two or three possible plans. The "U-plan" or the "island plan," so called. For a savings bank, the island plan does very well, and in some instances it is the best for that type of institution; but in the commercial bank the U-plan has generally been adopted, and it is better than any other arrangement. To begin with, the public is more easily distributed, directed and accommodated. Service is more easily rendered, and the effect on coming into the building and looking down into a wide public area is ever so much better. As to the width of the public space, 18 feet is perhaps a minimum width; 20 feet is better, 22 excellent, and 24 feet in width gives a real bank, dignified and practical in every way.

The best location for the officers is at the front of the building. In some modern banks they have been put in the rear. This is not a good plan for two reasons: they are not so accessible to the public, and the officers' open area at the front greatly enhances the effect of space to those entering the bank. It is well, therefore, to make the officers'

quarters commodious, and to have the screen start as far back from the entrance as will accommodate the number of wickets desired. When it comes time for expansion, the officers' space may be utilized for the screen, and the officers may be moved to a balcony. As a matter of fact, a low balcony for the executives has proved to be a very good place for them. This position keeps the small business down on the first floor, where it properly belongs, and permits the officials of the bank to give their time to more important matters. In every instance where we have carried this idea out (always as a result of necessary expansion), it has worked well.

*Screen Expansion.* Of course the great factor in the bank's expansion is the screen. The possibility of altering its arrangement is one of the prime essentials of good bank planning. Such portions as are intended to be moved should be so designed as to be easily removable, and the marble work is best backed up with slate and set up on channel irons. The joints and miters should all be arranged for at the start, so that extra sections of screen may be put in with the least inconvenience. In fact it is sometimes well to purchase additional wickets for converting inactive sections of the screen into active cages. It is frequently convenient to place consultation rooms or offices behind the screen at the start, as these are the easiest to make over into cages. The screen is best made of bronze because it can be made lighter. It should obstruct the eye as little as possible. The lighter it is the less it counts as an element of construction; and the more it becomes a matter of furnishing, the less reason there is for having architectural symmetry. There is no need, therefore, to have the screen start at the same distance from the wall on each side of the room. It is to a great extent a matter of convenience.

*Location of Departments.* With regard to the location of the various departments, this must be gone into carefully to suit individual requirements.



There are some general rules which usually apply, however. The note cage adjoins the officers' quarters. There is one theory which puts the paying tellers on one side of the public space and the receiving tellers on the other, but not directly opposite one another. When the public area is contracted, this distributes the lines and sometimes prevents congestion. On the other hand, it is well to put the paying and receiving tellers, who are always the busiest, where they receive the most advantageous light. This should come from the side or back. It is trying to have to face the light all day. If the building is lighted on one side, then all the tellers are better on that side. The public likes this arrangement too. With a wide public space, any arrangement of tellers may be had, and there is no advantage in putting the paying and receiving cages on opposite sides. The savings department is well placed on one side, so that the lines to its windows may be separate, and that its customers may come in and go out with as little interference with the commercial part of the bank as possible. These departments are best apart.

*Workroom.* The smaller city bank prefers to have the workroom on the first floor. This is a good place for it, provided there is area enough. The workroom located here should be so designed that it can be taken out eventually and the space used to enlarge the banking room. The metropolitan banks, of course, have all their workrooms on the

upper floors, and it is entirely satisfactory to locate them there even for the smaller institutions. The telautograph, the pneumatic chute, the electric lift, intercommunicating telephones, etc., make the second story workroom accessible and convenient. In fact many bankers in the smaller cities have told me that they prefer to have the bookkeepers out of the banking rooms. The written word between the tellers and the bookkeeping department is a better record than the spoken. Mistakes are less likely to happen. If the workroom is put off the main floor, it is better on a floor entirely by itself. This work should never be done on open balconies in the banking rooms. Such balconies are noisy, always spoil the architecture, detract from the dignity of the interior, and are usually poorly ventilated, old fashioned and generally out of date. The workroom should be a self-contained room, treated acoustically so that it will not be noisy, and if this is adequately done it is not necessary, in the average bank, to provide a separate machine room. There should be in connection with the workroom, emergency toilets for both sexes, a drinking water fountain, and one if not two wash basins, depending on the number of employees. Usually it is better for the pneumatic tube service to deliver at the center of the workroom, where the bookkeepers may be on one side and the transit department on the other, all items going to either one department or the other in an orderly way. While



Adirondack Trust Co., Saratoga Springs, N. Y.  
Alfred Hopkins, Architect



Officers' Space, Suffern National Bank



Suffern National Bank, Suffern, N. Y.

Alfred Hopkins, Architect

the pneumatic tube is entirely practical and satisfactory, it is not a bad idea to put in an electric lift as an emergency feature. It will often be useful.

*Stationery.* One thing the importance of which is usually under-estimated and forgotten about in the bank building is having proper facilities for taking care of the stationery. Bank stationery is very important, and its cost frequently runs into considerable money. Even small banks will have five, six or eight thousand dollars' worth of stationery, while the larger banks have anywhere from forty to sixty thousand dollars invested in stationery; in fact, a bank's stock of stationery is frequently larger and more valuable than that of any stationery store in town. For this reason it must have a proper place for its being received, unpacked and stored. The proper place for its entrance is not the front door. Stationery should be delivered to and unpacked in the basement, where the empty boxes may be conveniently burned in the boiler room, and the contents put upon the elevator if the stationery room is on an upper floor. We have frequently tried to work out storage for stationery in the workroom itself, but it is impossible to make this a shipshape arrangement. Stationery is very disorderly in appearance (though it should not be), and having a separate room is after all the best way of providing for it, wherever possible.

*Luncheon Rooms.* Another accessory of the bank, frequently very desirable, is a luncheon room, or a small kitchenette where luncheons may be cooked. In the smaller cities banks are now coming

to provide luncheon for their employees. The usual arrangement is that the bank gives the luncheon and the employee gives half of the luncheon hour for it. Good home cooking is very much better than the restaurant food which the employee gets in the city. All the large banks find it greatly to their advantage to provide such service. The big metropolitan institutions do this invariably, and in many the rule that employees have luncheon in the building is more or less strictly enforced.

*Cloak Rooms.* As was said before, it is not well to place the lavatories, cloak rooms, etc., in the basement. There is not enough light or ventilation there, and in basement rooms wet garments are slow to dry out. One of the rear mezzanines is an excellent place for such rooms as experience proves.

*Bank Design.* As to the bank's exterior design, good architecture here is a valuable commercial asset. A dignified, Classical building creates in the public mind a feeling of respect and confidence for the institution so housed, but there should be certain features very necessary from the bank's point of view and which are also very appropriate to such architecture. Among these are good large windows, to let as much light into the bank as possible and to permit the man in the street to see in as much as possible. There is no better advertising for the bank than its building. Large windows permit a good view of the interior from the outside, and especially at night when the building should be brilliantly lighted. The bank has long been unwelcome in the merchandising district be-

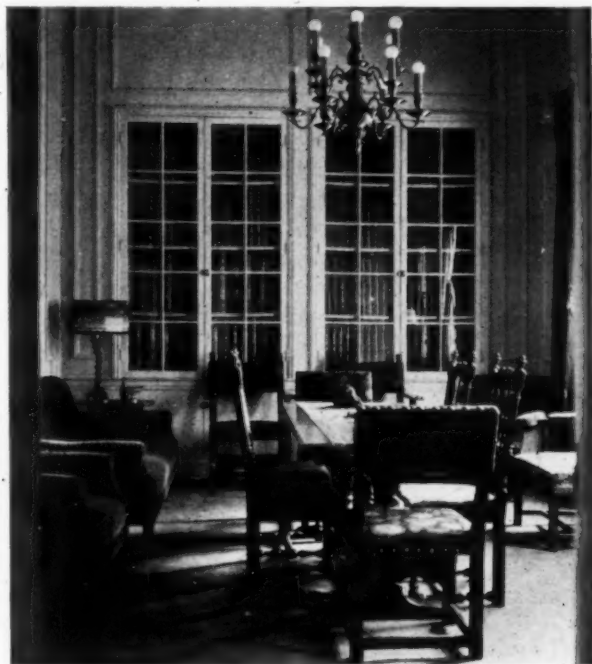


High Attic Walls Provide Space for Lettering. City National Bank, Binghamton, N. Y.

Alfred Hopkins, Architect

cause it creates "a dark corner." There is not the slightest reason for the bank's being dark at night. In fact this policy is particularly stupid. Many banks burn up vast amounts of current in large electric signs upon the roofs, while the buildings on the street are dark. Reverse this policy. Light up the interior of the building, and let the public take a look at the institution. It is sure to pay.

Reverting again to the value of the public's looking into the bank from the street, it is absolutely important to do away with the commercial bank builders' never-failing habit of putting the directors' room across the front of the building, and entering under this in a low story which usually encloses a customers' space on one side of the entrance door, with a women's room on the



Decorative Treatment of Old Ledgers in Enclosed Bookcases. Directors' Room, City National Bank, Binghamton



Door of Directors' Room on Balcony Overlooks Main Banking Room, City National Bank, Binghamton



other. This shuts off the front of the bank from public view in the worst possible way. The mezzanine is very useful in bank construction, but it should always be at the back of the building and never at the front. In almost every instance it is well to take consultation rooms away from the front windows and put them either back of the screen, if the lot is wide enough, or incorporate them as part of the screen. As a matter of fact, the average banker is likely to overestimate the real necessity for having consultation rooms. All the great metropolitan banks do their business out in the open, and having a dignified officers' space as large as possible is always a great advantage to a bank.

#### *A Specific Example.*

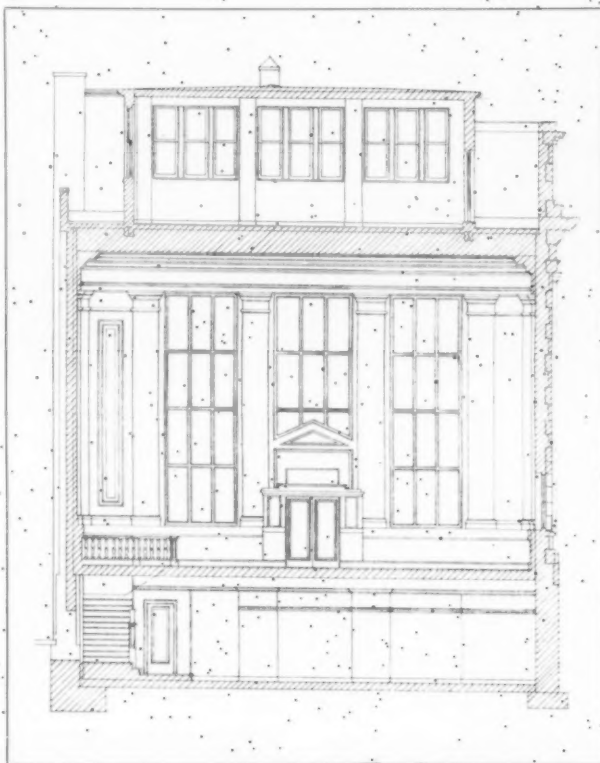
As the new building for the City National Bank at Binghamton, N. Y., is a carefully planned structure and was designed along the lines here indicated, I would like to give a detailed description of it as illustrating the principles set forth here. The problem was to design a substantial building from the point of view of the exterior. It had to be an "individual" structure, the lot not being of sufficient area to be advantageous for an office building, and it was necessary to build on this corner something that would always hold its own with any buildings which might be built near it. A proper height was absolutely necessary, and in view of the necessity of having large windows below, the only way to secure a dignified effect was to rely on masonry above, adopting precisely the same scheme of design which the Romans used for their triumphal arches. Consequently, heavy attic walls (the architects' name for wide masonry areas which come above the main cornice line of his building) were essential. How to get a well lighted and well ventilated workroom and include this feature was the problem. The workroom was therefore set back behind the solid outside walls some 6 feet. By this arrangement it was easy to fill the workroom walls with windows, which would not have been possible if the workroom had been extended to the outside of the building. Here the windows would have had to be treated architecturally and not commercially,

and here skylights were out of the question. It would seem at first that the blank outside walls, only 6 feet away, might make the workroom dark, and that sufficient light would not get in between the outside walls and the workroom walls. This happily proved not to be the case; in fact the outside walls do not seem to darken the workroom at all, and if they were removed altogether the workroom would be very little lighter than it is now. It is amply lighted with numerous windows on all four sides, and is ideally ventilated. This is really

an excellent arrangement for a workroom in an individual bank building. In fact the entire plan of this bank may be studied to advantage. The area was small, smaller than we wanted, so it was necessary to take advantage of every square foot of land. The safe deposit department was put in the basement story; together with the women's room and the trunk storage department as well.

The main banking room has a height of 35 feet in the clear, and has been laid out to provide for future expansion. The president's office at the side is just wide enough to provide at some time for two cages, and the extra wickets necessary were furnished by the bronze contractor for this purpose.

On the other side, doing away with the officers' quarters, the screen is planned to extend toward the front, leaving only enough place for a stairway to the future officers' balcony. The directors' room was put on a mezzanine, at the rear and has excellent ventilation. A new idea was tried out here, and it has been very generally commended. Instead of having a long table with chairs around it, in the usual way, it was determined to make this directors' room more of a library in effect. It is fitted with comfortable chairs, writing desk, sofa and a table only large enough to accommodate the presiding officer and the secretary. Not the least interesting feature of its decoration is the bookcase at the end, holding the old ledgers and cash books, which go back to 1852. This arrangement of the directors' room has been popular from the beginning, and is one of the bank's most successful details. It is as different as possible from the usual, conventional board room.



Section Through City National Bank, Binghamton, N. Y.,  
Showing Workroom on Roof.

# The Country Club, Roanoke, Va.

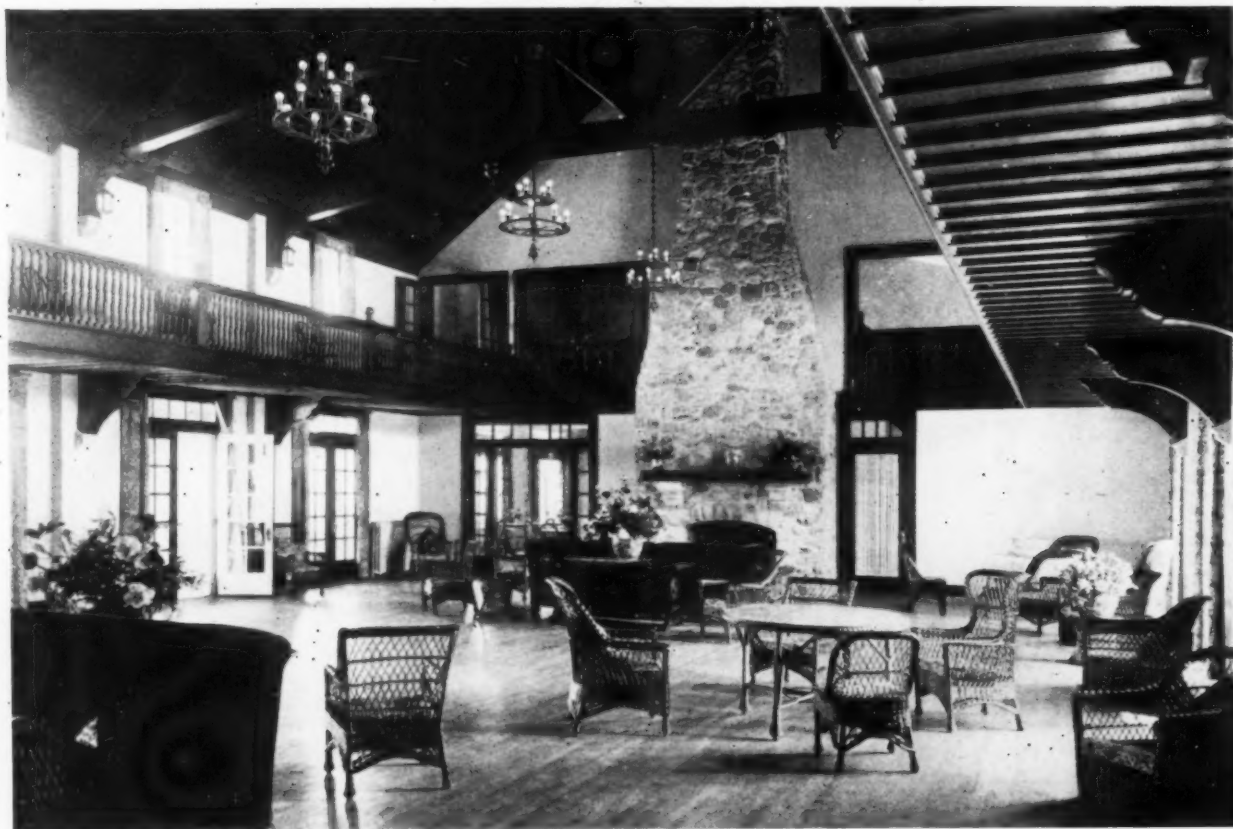
SMITHEY & TARDY, ARCHITECTS



VIEW OF THE ENTRANCE FRONT



THE CLUBHOUSE AS IT OVERLOOKS THE GOLF LINKS



THE LOUNGING ROOM



DINING ROOM  
THE COUNTRY CLUB, ROANOKE, VA.  
SMITHEY & TARDY, ARCHITECTS



# ✓ The Community Playhouse, Pasadena

ELMER GREY, ARCHITECT

By MARGARET CRAIG

THE new Pasadena Playhouse will undoubtedly become the prototype of many a community theater throughout the country. Its beauty of architectural treatment alone is enough to afford inspiration to those seeking a model of a small, modern theater structure. It is built in the version of the Spanish style known as "early Californian" architecture, and its white, hand-troweled plaster walls, rising in even tiers from the entrance courtyard to the lofty stagehouse in the rear, are very dazzling against the blue sky of southern California.

Elmer Grey, the architect, has given to the building much of the quality that is so closely woven into the warp and woof of the drama itself,—humanism, poetry, and aspiration,—and he has achieved in his work the closest correlation of fine proportion, a varied rhythm, and a noteworthy regard for the subordination of details, as well as for the correct dignity of climaxes. The development of the dramatic institution it houses, with all of its affiliated departments, has been logical and always marked by the feeling of simplicity and sincerity, and Mr. Grey has expressed much the same qualities in the building, discarding the unnecessary ornamentation that is so common in theater construction, and relying on the beauty of line as exemplified in the outside stairway, as it swings to the upper story, and on a plan providing for the serving of one function, affording a suitable center for community interests.

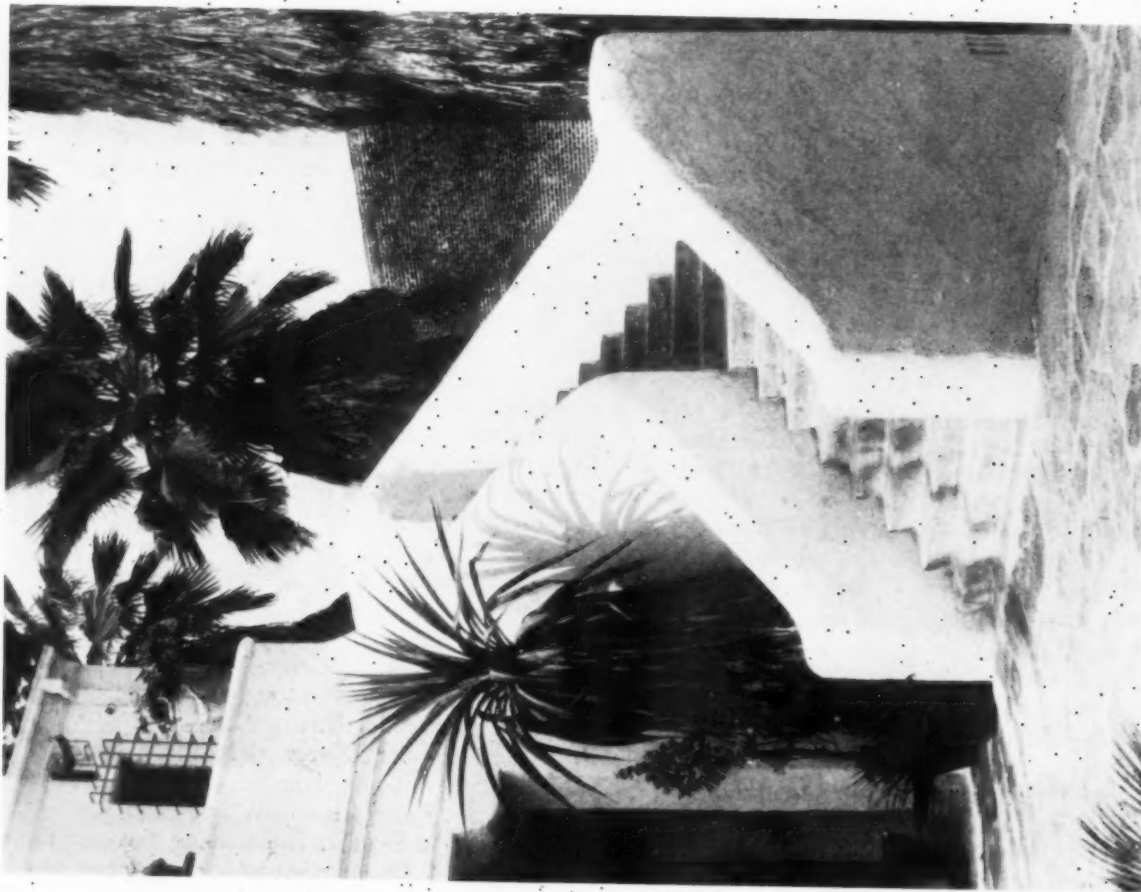
Although the auditorium is set well back from the street, it has by way of introduction a most inviting court, with shops on either side, and a covered arcade that borders it on the north and leads to the main portico that gives access to the series of entrance doors. It is a hospitable courtyard, and fittingly indicates the spirit of this communal organization. On every side are arcades and colonnades; a brightly colored tile fountain graces one corner, and a romantic stairway curves easily to the balustrade that is above the entrance arcade. Potted plants from semi-arid and tropical regions are grouped at the bases of the pillars along the top of the balustrade and around the roots of the tall palm trees. The court is paved with golden-hued flagstones that possess an unusual texture, due to the uneven cutting of the stones. The stairway, an important feature of the exterior, rises to the long passage above, where are found a recital hall, and numerous business offices of the governing directors, the play director and their associates, publicity men and the managing committees. From this center the access to the auditorium is easy, the stage and the workrooms being beneath on the first floor.

Returning to the court, and passing through the main arches of the arcade, which are especially marked with massive wrought iron lanterns, one reaches the line of entrance doors that open into the foyer. Its walls are of broken tones of blue-green;

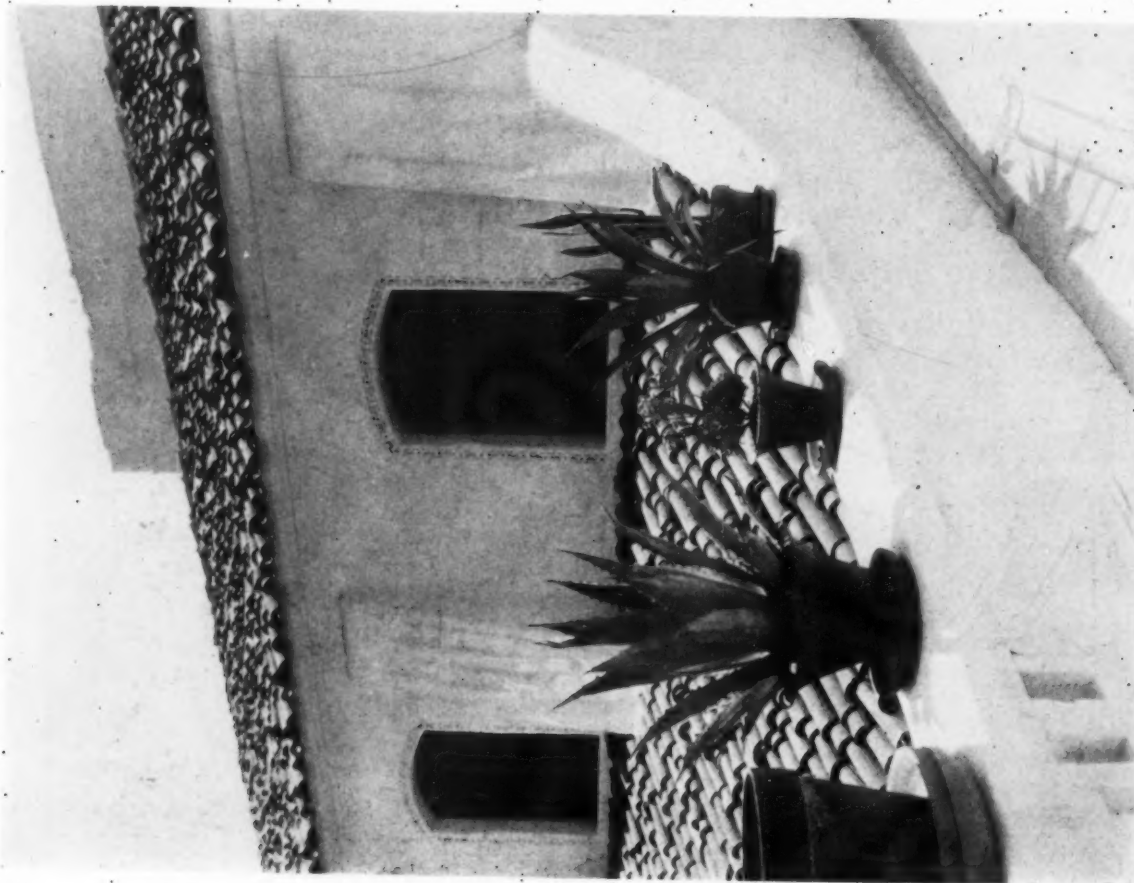


One Side of the Entrance Courtyard, Community Playhouse, Pasadena

Elmer Grey, Architect

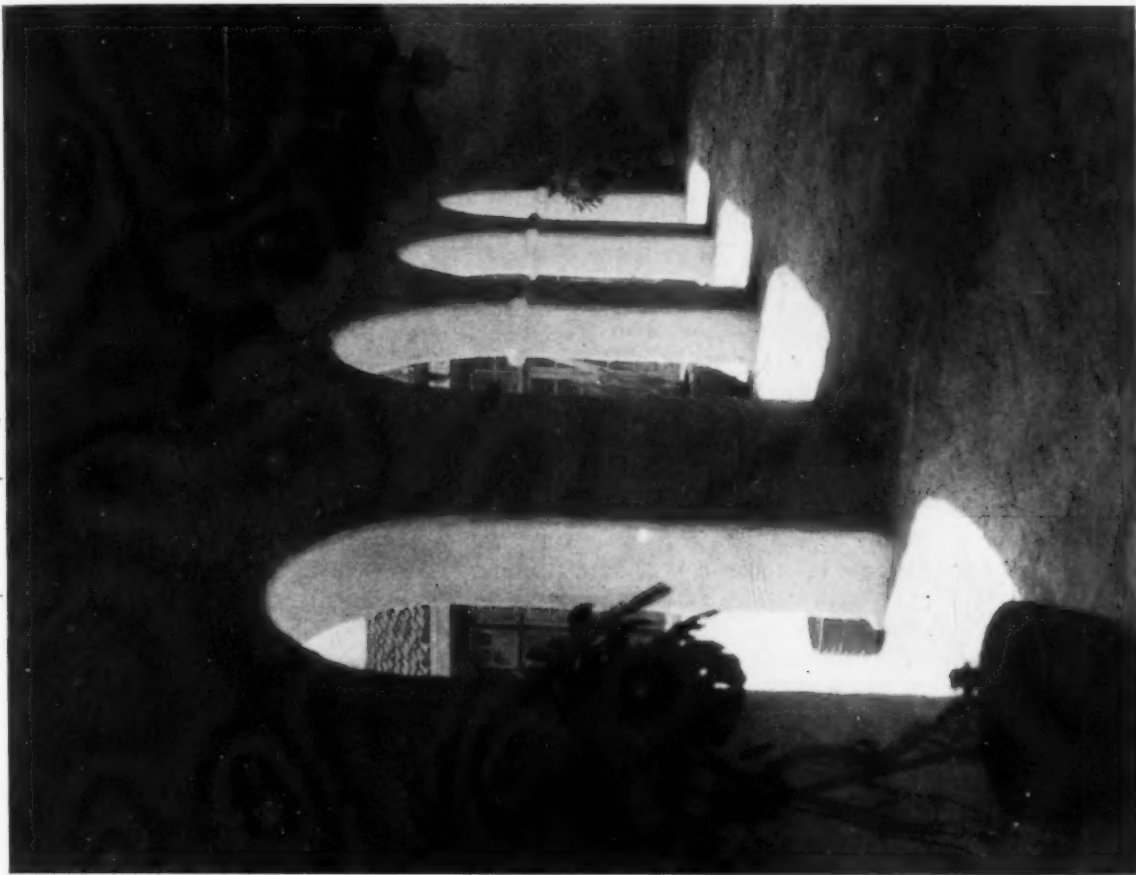


STAIRS TO BALCONY

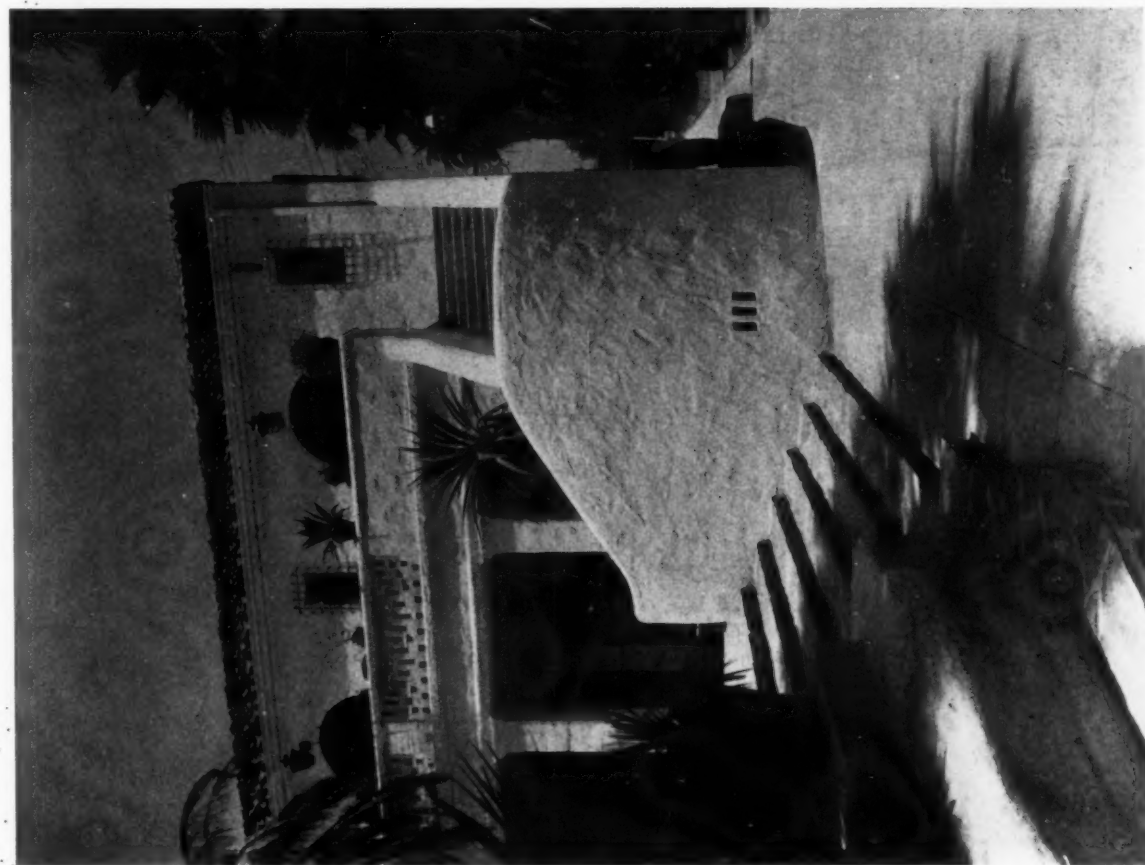


DETAIL, BALCONY PARAPET

COMMUNITY PLAYHOUSE, PASADENA.  
ELMER GREY, ARCHITECT



THE ENTRANCE CLOISTER



ENTRANCE AND BALCONY STAIRS

COMMUNITY PLAYHOUSE, PASADENA  
ELMER GREY, ARCHITECT



the ceiling, of a still darker value, of cement simulating wood, having been pressed by wooden beams before it was dry. The ornamentation is of richly colored flowers and fruit in oils, slightly toned down with uneven lines of gold leaf. Four doors, hung with heavy, dark velvet curtains, open into the auditorium, and disclose the beauty beyond. The lines of the interior decoration swing around to the stage; and it is not surprising that the painted drop curtain is the first thing to challenge the eye of the visitor. The subject is a huge galleon floating in a sea of ultramarine blue, streaked with dashes of reds and yellows. The ship stands out against a brownish cloud that is shot through with a burst of golden sunshine. It was painted by Alson Clark, of Pasadena, and was a gift to the Playhouse.

Other notable features of the interior are the balcony which curves around to the two boxes built at the sides of the stage; and the ceiling that in its broad expanse of colorful patterns resembles a bed of larkspur when lighted by a summer sun. The deep eaves of the ceiling are arched, and in this way form reflecting surfaces of indirect light. The boxes have shell-like tops, and are decorated in blue and gold. They enclose wrought iron grilles and windows at the second story level. To decorate the side wall spaces there are two windows, framed by borders of terra cotta in relief and hung with velvet curtains. The floor of the stage extends out over the orchestra pit and is reached by steps from the first row of chairs. At either side of the orchestra pit are slightly sloping passageways that lead to the green room on the other side of the stage.

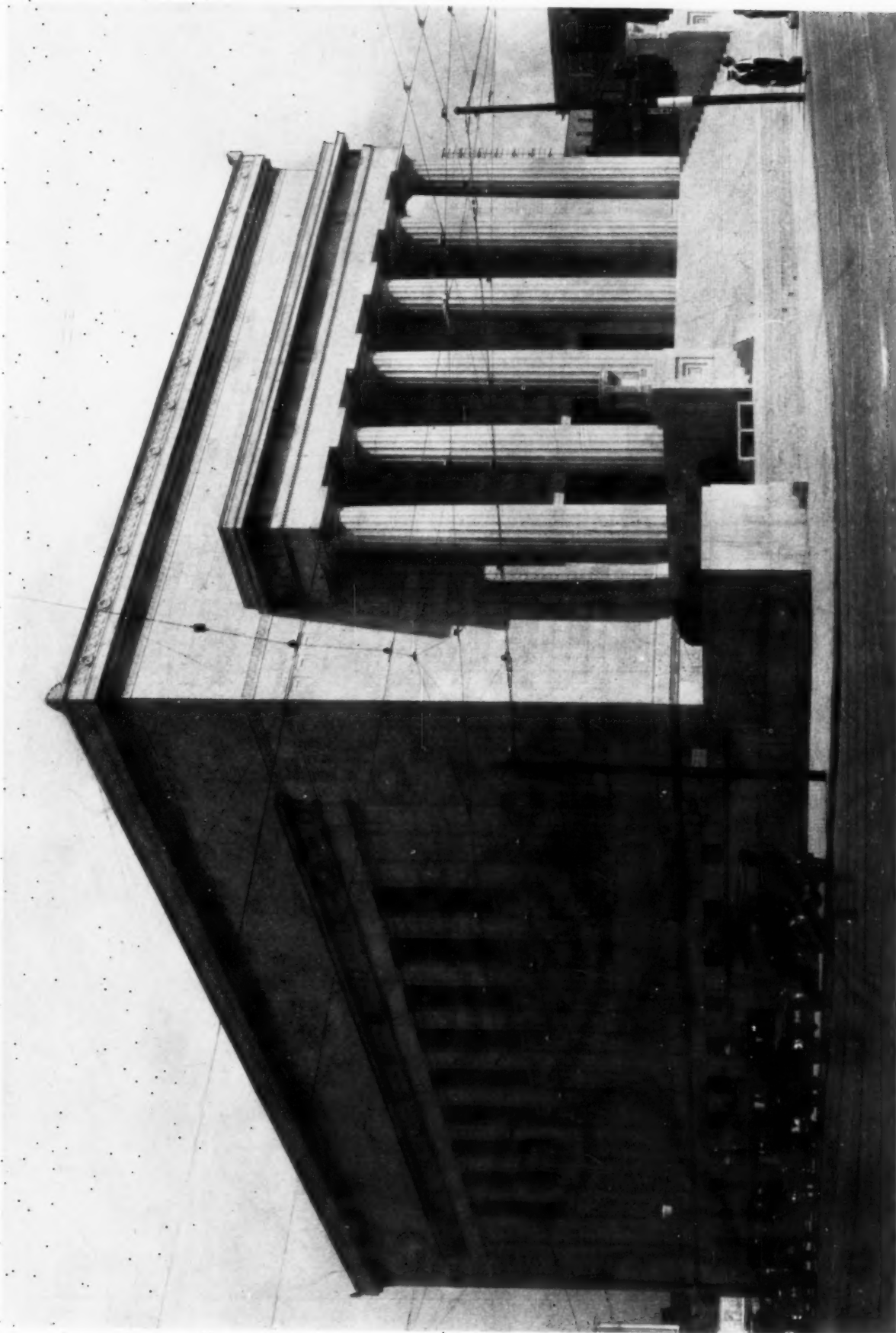
The green room, of a truly Drury Lane character, is an important detail of the theater, and it is destined to exert influences that are important not only for the actors but for the community. It is used as a social center, and for entertainments more or less connected with the drama. Large mirrors occupy the important wall spaces, and between them are red lacquered doors that open into numerous dressing rooms; all well equipped with modern lighting and connected with signal bells. In connection with the green room are the departments for making-up, for the showers, and the kitchen and lockers used by the musicians and ushers. In the north wing, close at hand and easily reached from every part of the building, are the workrooms where many of the costumes are made, where the properties are stored, and where the textiles are dyed for the stage sets. Altogether, the building serves every useful purpose without sacrificing the beauty of architecture. It is a structure that possesses aesthetic value as well as being in accord with the fundamental laws of fine spacing and unified arrangement, and it possesses important qualities that enhance the prevailing sense of comfort and harmony.

The entire cost of the building and its equipment was raised by public subscription, and this fact formed an incentive for all of those engaged in the erection of the structure to carry out each detail with the utmost care and regard for artistic effect. As a monument of modern architecture it is admirably related to its Californian environment, and it will always stand as an expression, a milepost on the road of community dramatic achievement.



Entrance Court Community Playhouse, Pasadena

Elmer Grey, Architect



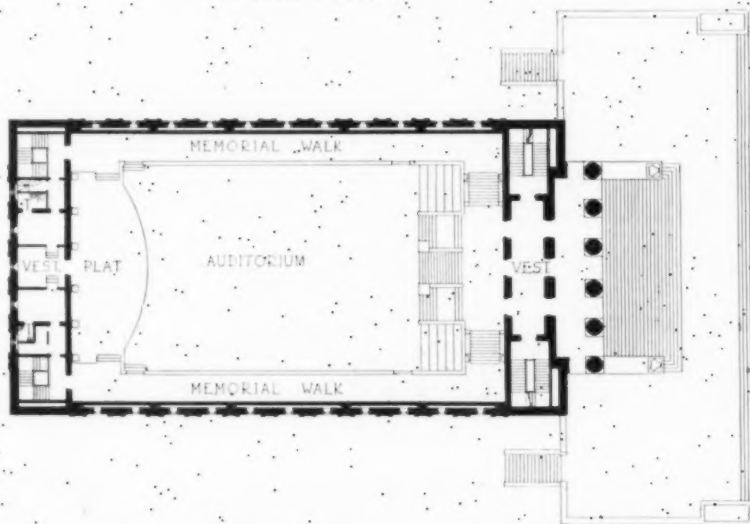
*Photos. Tebbes & Knell, Inc.*

MARYLAND WAR MEMORIAL, BALTIMORE  
LAWRENCE HALL FOWLER, ARCHITECT

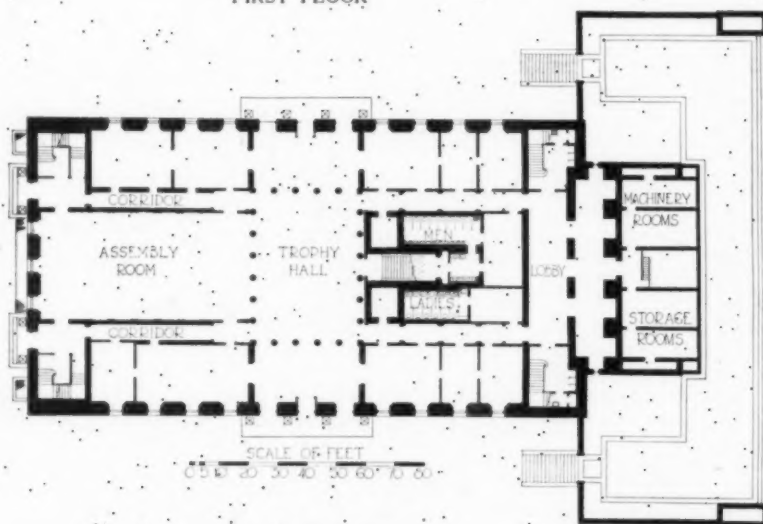
*Plans on Back*



SECOND FLOOR



FIRST FLOOR

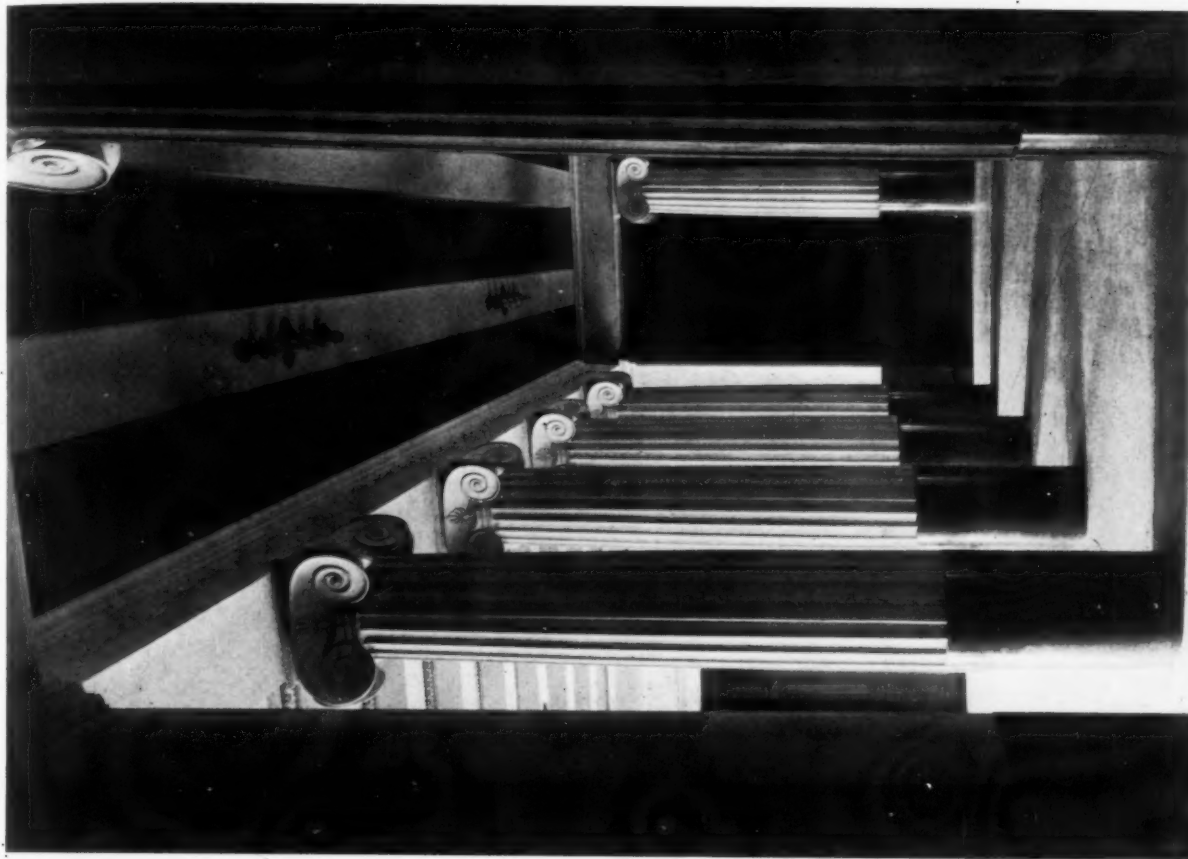


GROUND FLOOR

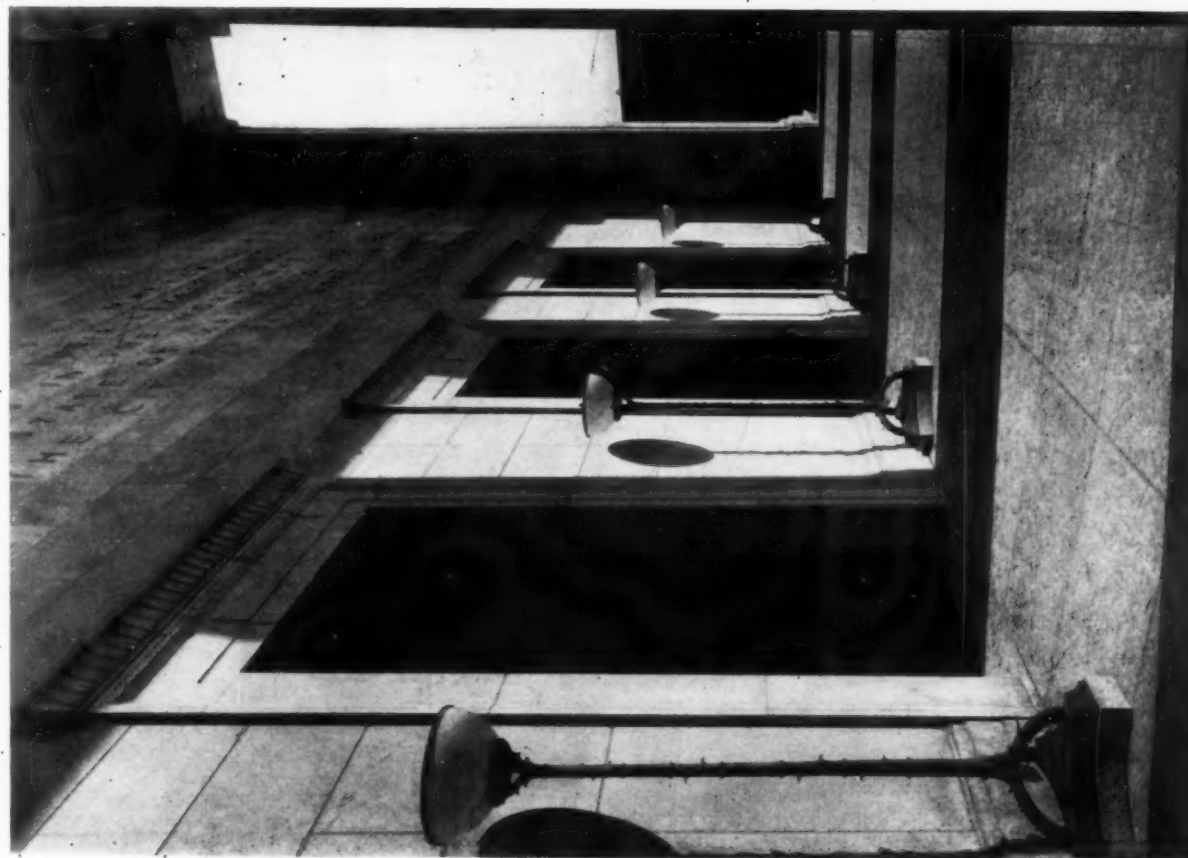
MARYLAND WAR MEMORIAL, BALTIMORE

LAWRENCE HALL FOWLER, ARCHITECT





TROPHY HALL



ENTRANCE COLONNADE

MARYLAND WAR MEMORIAL, BALTIMORE  
LAWRENCE HALL FOWLER, ARCHITECT

Architectural  
Library



*Photo, Drir Duryea*

VIEW OF A SIDE ELEVATION

MARYLAND WAR MEMORIAL, BALTIMORE  
LAWRENCE HALL FOWLER, ARCHITECT



*Photo, Tebbbs & Knell, Inc.*

MEMORIAL HALL, TOWARD PLATFORM



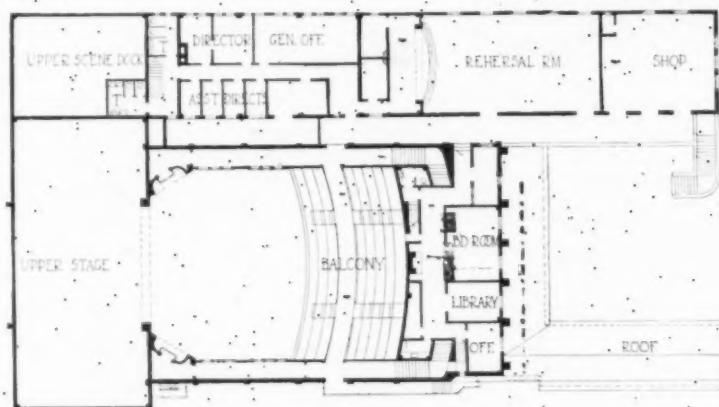
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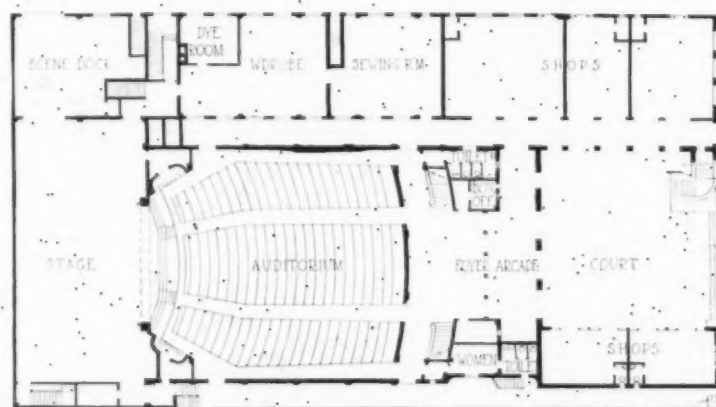
*Plans on Back*

ENTRANCE PATIO  
COMMUNITY PLAYHOUSE, PASADENA  
ELMER GREY, ARCHITECT

*Photos, Margaret Craig*



SECOND FLOOR



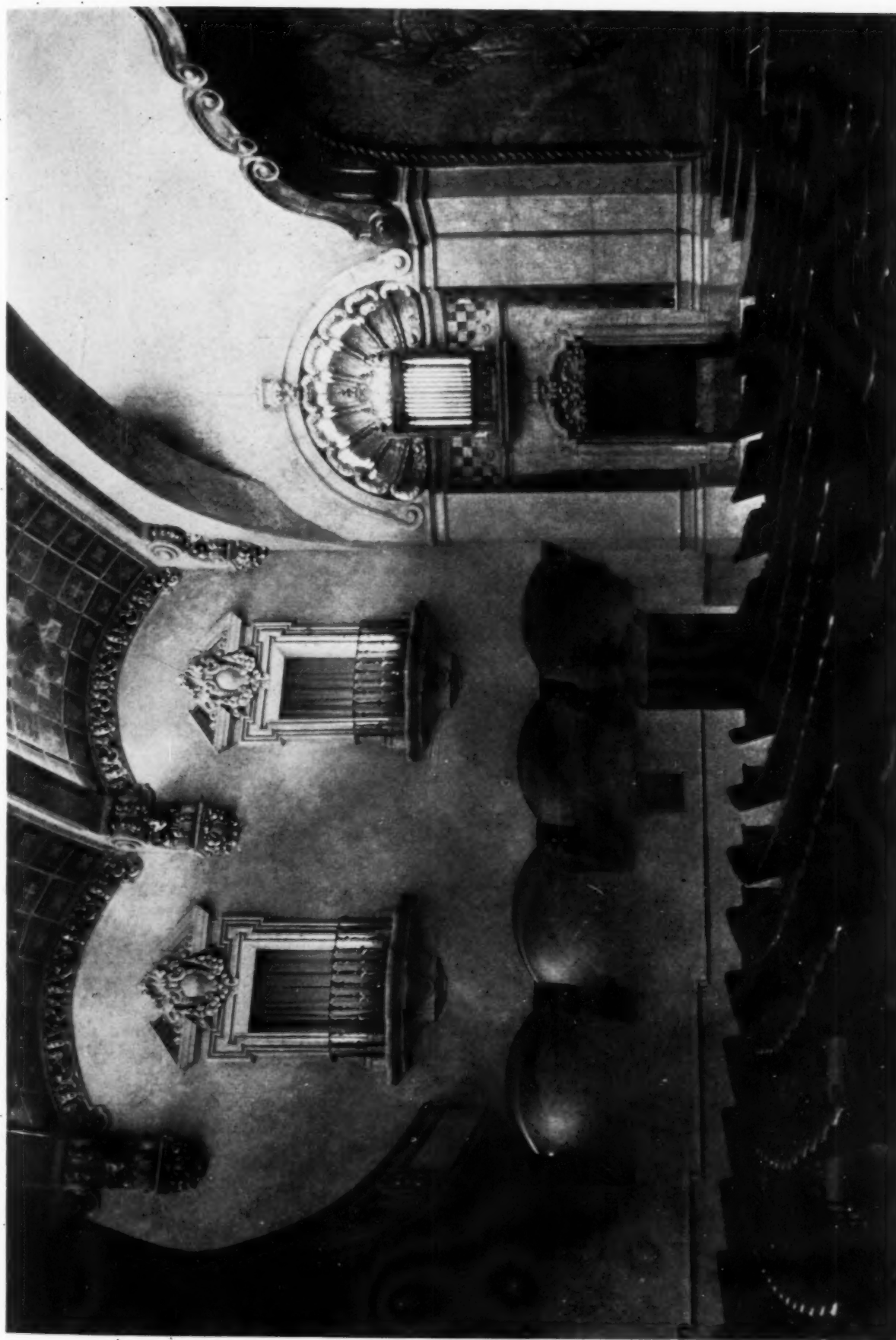
SCALE OF FEET  
0 10 20 30 40

FIRST FLOOR

COMMUNITY PLAYHOUSE, PASADENA

ELMER GREY, ARCHITECT





AUDITORIUM

COMMUNITY PLAYHOUSE, PASADENA  
ELMER GREY, ARCHITECT

Architectural  
Library

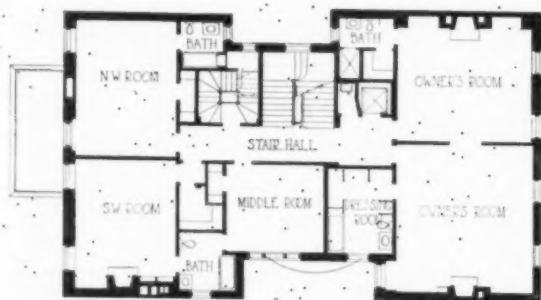


*Photos. Trowbridge*

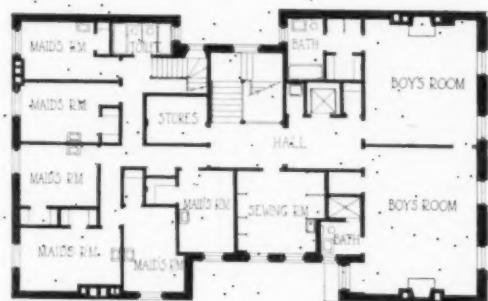
*Plans on Back*

HOUSE OF JOHN P. WILSON, ESQ., CHICAGO  
HOWARD VAN DOREN SHAW, ARCHITECT

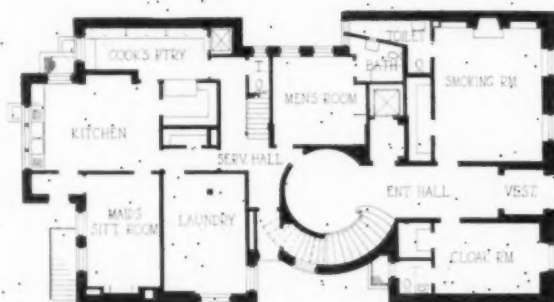




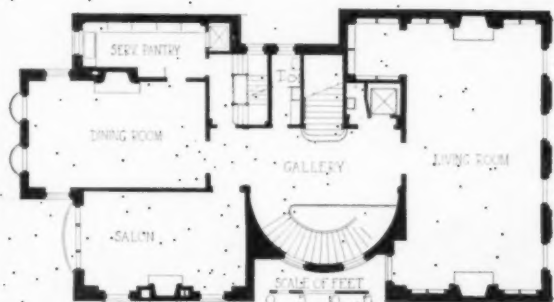
THIRD FLOOR



FOURTH FLOOR



FIRST FLOOR



SECOND FLOOR

HOUSE OF JOHN P. WILSON; ESQ., CHICAGO

HOWARD VAN DOREN SHAW, ARCHITECT



LIVING ROOM



DETAIL, DOOR INTO HALL

HOUSE OF JOHN P. WILSON, ESQ., CHICAGO  
HOWARD VAN DOREN SHAW, ARCHITECT

Architectural  
Library





TWO VIEWS OF DINING ROOM  
HOUSE OF JOHN P. WILSON, ESQ., CHICAGO  
HOWARD VAN DOREN SHAW, ARCHITECT

Architectural

# House of John P. Wilson, Esq., Chicago

HOWARD VAN DOREN SHAW, Architect

WITH the increasing popularity of large and palatial apartments for city homes, the number of private city houses built each year has dwindled rapidly. In fact an outstanding example of new urban domestic architecture is today so rare that it is a pleasure as well as a privilege to publish so fine an example of modern Georgian architecture as this house recently completed in Chicago.

The simple four-story facade shows a dignified treatment carried out in brick and limestone. The basement story with its hospitable entrance door and well proportioned windows is built of limestone, above which the three remaining stories are constructed of dull red brick. Arches with limestone key blocks provide slight recesses for the tall windows of the main floor. A narrow limestone cornice with modillions breaks the facade above the second story windows, giving the effect of a high parapet or attic to the wall of the fourth floor above. A plain limestone coping finishes the top of the facade. A thin limestone balcony supported on delicate corbels separates the limestone walls of the basement from the brick walls above. A simple wrought iron balustrade further accentuates and ornaments this division between the basement and the upper stories, and a high wrought iron fence at the sidewalk level furnishes another decorative note emphasizing the character of the building.

The plan of Mr. Wilson's house is clearly indicated by the arrangement of windows on the front facade. Entering the front door, a small cloak-

room is located at the left, while on the right is a larger room used as a study or office. The entrance hall leads to the center of the house, where a graceful circular stairway with an interesting wrought iron balustrade leads to the main floor. The walls of this entrance hall are laid up in Yorkshire stone, with a black marble base which harmonizes well with the black terrazzo floor. The stairway also is constructed of warm toned Yorkshire stone. In the rear of the basement floor are located the kitchen, servants' dining room, laundry, pantry and storage rooms, which are reached from the street through a narrow passageway. The plan of the first or main floor shows a large living room, extending the entire length of the front of the house. This room, which is of unusually fine proportions, is paneled from floor to ceiling, with an elaborately carved cornice and panel mouldings in typical Georgian style. Furnished almost entirely with rare pieces of antique English furniture of design appropriate to the period of the room, a remarkable air of age and dignity is obtained. A pair of antique crystal chandeliers, interesting old paintings, wall sconces and quaint original bookcases still further add to the Georgian atmosphere of this delightful room. The paneled walls are painted a soft shade of brown and are glazed to produce an antique tone. The carved panel mouldings and cornice are gilded and glazed to further enhance the rich color tones of walls and ceiling. The walnut doors into the center stair hall, the walnut bookcases and the brown toned



Stairway and Entrance Hall



The Yellow and White Salon



mahogany of the furniture make a pleasant contrast to the lighter tones of the walls. The massive bolection moulding of the fireplace is of dull red marble, which color is repeated in some of the lamps and shades, as well as in the antique Chinese rugs. Chinese red appears again in the raw silk hangings of the windows, making a delightful contrast to the brown and old gold tones prevailing throughout the entire room. The furniture coverings vary in color, Chinese green, Empire blue, taupe, and the various colors of old needlework are used. Several of the old pieces of furniture are Chinese Chippendale, while the rest are in varying styles of the Georgian period—Hepplewhite, Sheraton and Adam.

This great living room is entered from a spacious center stair hall with black and white marble floor, walls, pilasters and cornice painted a warm gray, and window hangings of rich green, which provides an attractive approach to the open archway, through which a broad stairway leads to the floors above. Service stairs, store closets and a lavatory are also located adjacent to this center stair hall. At the rear of this floor are a dining room and salon of nearly equal sizes. Both rooms are decorated in a simple adaptation of the Adam style. In the dining room an antique marble mantelpiece and old armchairs, all in the Empire style, are combined successfully with Adam pieces. Various tones of green are used for the color scheme. Against the

gray-green walls, which are broken into panels in an interesting manner, hangings are used in which an Empire design in rich yellow appears against a ground of green. The dining room projects a few feet beyond the salon, making it possible to have a window in each side wall as well as at the end of the room. In the salon the walls are painted white in characteristic Adam fashion, against which the vari-colored marble mantelpiece in this same style makes a pleasant contrast. On the dark stained floor a richly colored rug, showing blue and rose against a yellow background, furnishes a delightful color note. Color again relieves the whiteness of the walls in the green and gold painted cabinets set into the deep niches which are recessed within the walls on either side of the fireplace.

The second floor of this unusually well planned and delightfully decorated house is taken up by a suite of two bedrooms and dressing room on the front, and two guest rooms with baths on the rear. On the third floor, are additional family bedrooms with baths connecting, in the front, and at the rear, completely shut off from the front of the house, are located six servants' rooms and two baths. To sum up the impression made by a brief survey of this successful example of a modern American city house, designed, decorated and furnished with consummate taste and skill in the finest manner of the Georgian period, it can justly be said that it is one of the most perfect of recent American homes.



The White Walls of the Salon Are Relieved by the Rich Yellow Rug and Hangings

# THE BUILDING SITUATION

## A MONTHLY REVIEW OF COSTS AND CONDITIONS

THE building construction figures for the month of June, as reported by the F. W. Dodge Corporation, indicate an enormous total, approximately 40 per cent higher than for the corresponding month of last year. The contracts awarded during June in territory covering about seven-eighths of the United States total \$540,609,600, which is an increase of 9 per cent over May. For the first six months of 1925 the total value of building contracts let is over \$2,500,000,000, representing nearly 15 per cent more than during the first six months of the record year 1924. The building industry is today on a more stable basis than it has been for many years.

According to a recent survey issued by the Guaranty Trust Company of New York, some light is thrown on the question of comparative costs by a consideration of the area and value represented by contracts awarded. The average value per square foot of floor space during the first five months of this year and the corresponding period last year, for the different classes of buildings, is thus given:

Classification	1925	1924
Commercial .....	\$5.39	\$5.17
Educational .....	6.51	5.77
Hospitals and Institutions....	7.92	6.83
Industrial .....	6.91	6.78
Military and Naval .....	5.78	6.60
Public Buildings .....	7.65	6.85
Religious and Memorial .....	8.63	7.44
Residential .....	4.87	4.58
Social and Recreational .....	8.22	5.62
Average .....	\$5.47	\$5.06

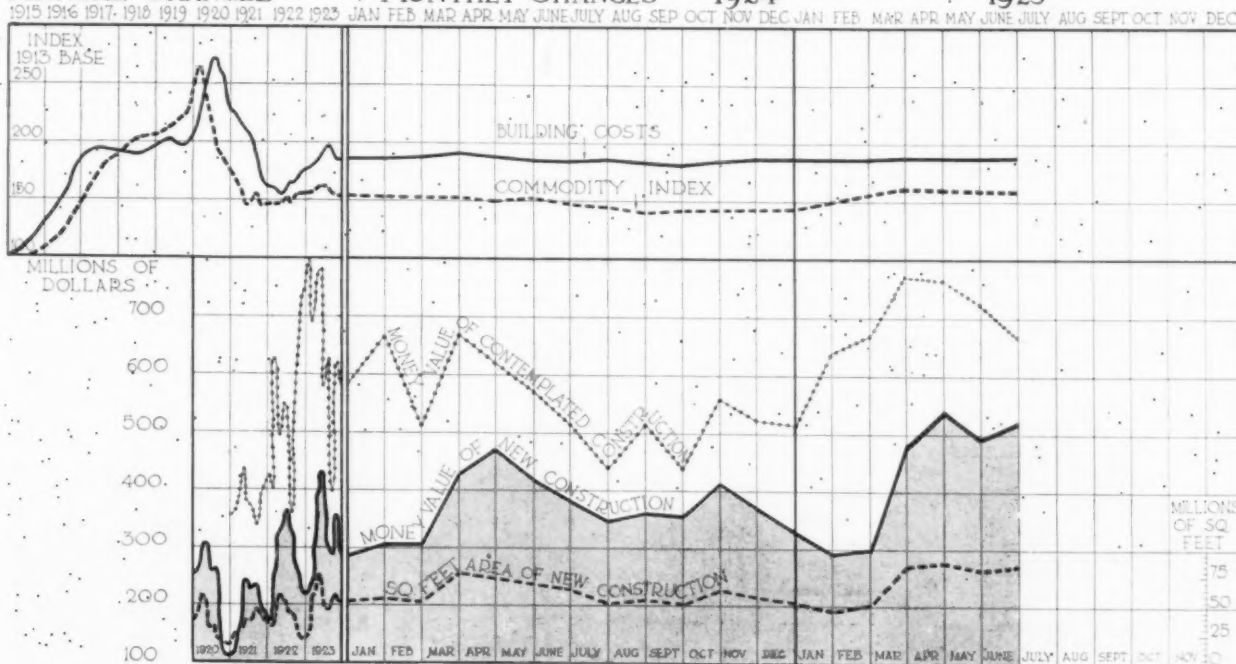
It will be noted that the average cost per unit of area is materially higher this year in every group, except military and naval buildings, which form only a very small proportion of the total. The average increase in unit cost is about 8 per cent. This increase does not by any means measure the advance in average building costs during the year, but it does provide some basis for the contention that an advance rather than a decline has taken place.

### ANNUAL CHANGES

### MONTHLY CHANGES

1924

1925



THESE various important factors of change in the building situation are recorded in the chart given here: (1) *Building Costs*. This includes the cost of labor and materials; the index point is a composite of all available reports in basic materials and labor costs under national averages. (2) *Commodity Index*. Index figure determined by the United States Department of Labor. (3) *Money Value of Contemplated Construction*. Value of building for which plans have been filed based on reports of the United States Chamber of Commerce, F. W. Dodge Corp., and *Engineering News-Record*. (4) *Money Value of New Construction*. Total valuation of all contracts actually let. The dollar scale is at the left of the chart in millions. (5) *Square Foot Area of New Construction*. The measured volume of new buildings. The square foot measure is at the right of the chart. The variation of distances between the value and volume lines represents a square foot cost which is determined first, by the trend of building costs, and second, by the quality of construction.

## Settings For Hand Fired Tubular Boilers

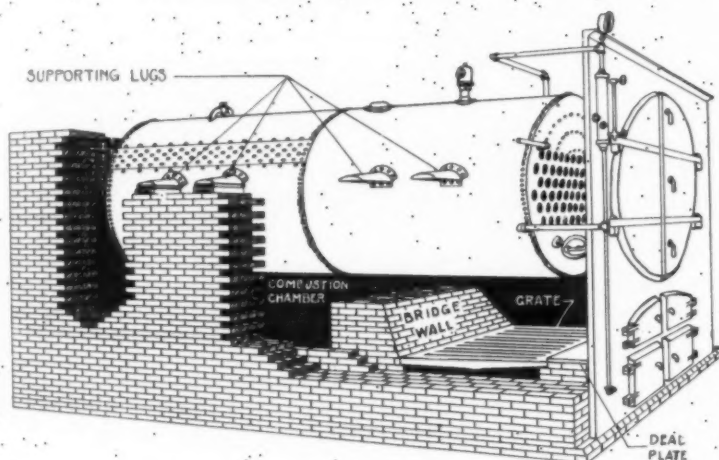


Fig. 12—Lug Support for Horizontal Tubular Boiler

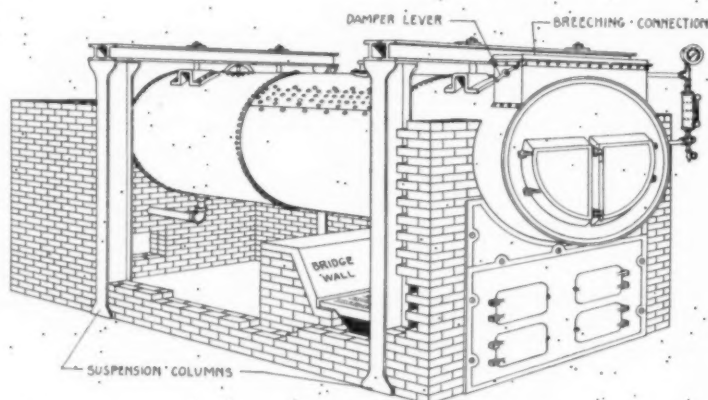


Fig. 14—Suspension Support for Return Tubular Boiler

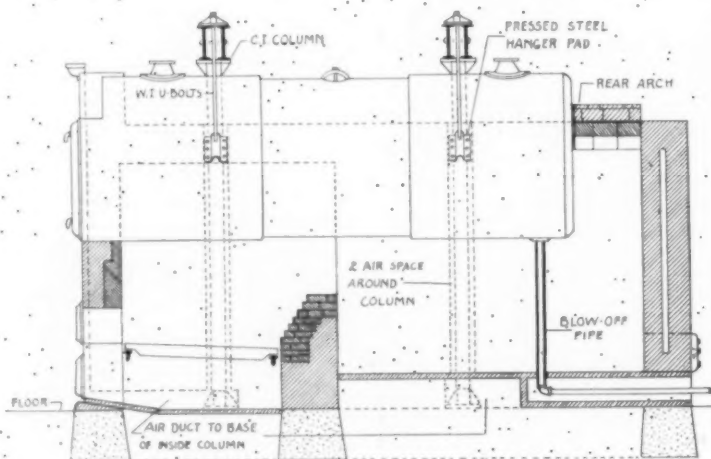


Fig. 15—Vent Ducts Protect Boiler Suspension Columns Against Overheating

The utmost possible precaution must be taken to prevent the columns from buckling when the furnace is stoked with gas, fuel oil or pulverized coal.

THE boiler illustrated at the left is supported by lugs riveted to the shell and resting on brick side walls. Boilers of up to 54 inches in diameter may be supported by two lugs on each side. From 54 to 78 inches they must be supported by the outside suspension type of setting, or at four points by brackets set in pairs.

Fig. 13 shows the method of providing for expansion and contraction in lug-supported horizontal-tubular boilers by anchoring the front lugs in place and resting rear lugs on rolls which permit the free movement of the boiler.

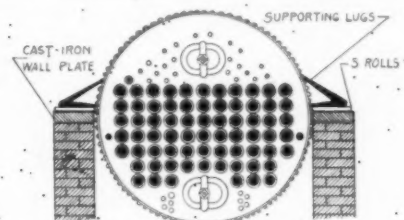


Fig. 13—Expansion Rolls Under Lug Supports

The suspension type of setting for return-tubular boilers (Fig. 14) is the best type of support, because the boiler is left free to expand and contract.

With either type of support a horizontal-tubular boiler is set  $1\frac{1}{2}$  inches higher at the front than at the rear, providing pitch to the blowoff outlet at rear and a rise of flues or tubes from the combustion chamber to the smokebox. The blowoff pipe is protected from direct heat by means of a V-wall, pointing toward the firebox but not touching the boiler.

Supporting columns, as shown in Fig. 15, should be encased in three courses of brick, but with a 2- or 3-inch space all around to allow a flow of cooling air. When two or more boilers are set in battery, an air tunnel is provided from outside setting to interior columns, and sometimes tops are connected with special flues. It is bad practice to connect these vents with the breeching from boilers. Under forced draft, there is danger of heat's being driven into the air spaces.

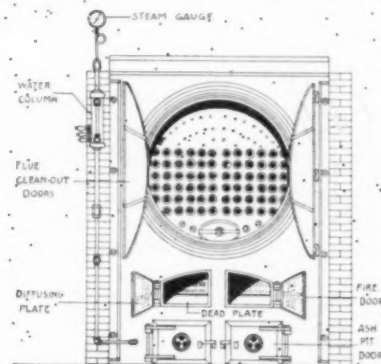


Fig. 16—Cast Iron Boiler Front

This is a typical front for a return-tubular boiler. This iron front has a backing of fire brick.



# ENGINEERING DEPARTMENT

## Power and Heating Plants

### THE GENERATING PLANT; BOILERS

By J. J. COSGROVE

EDITOR'S NOTE—The first part of this series of articles on "Power and Heating Plants" by Mr. Cosgrove, appeared in THE ARCHITECTURAL FORUM for April, 1925.

IT is necessary that a good, substantial foundation be provided to support a boiler and boiler walls. Concrete makes the best foundation, and it is well to have the concrete poured long enough before the delivery of the boiler to allow the foundation to become thoroughly set.

The bearing capacity of the soil must be considered when proportioning the foundation. In soft or swampy ground it might be necessary to drive piles along the line of the walls, or to build a concrete footing a couple of feet thick and over the entire area of the setting. The foundation is made 4 inches wider all around than the brickwork for the boiler setting. A boiler setting for a horizontal tubular boiler is shown in Fig. 17, a sectional view of a boiler setting is shown in Fig. 18, and a half elevation and half cross section in Fig. 19.

Measurements for the various parts of a boiler setting for hand-fired boilers from 36 inches in diameter up to 84 inches in diameter are given in Table II. The reference letters on Figs. 17, 18 and 19 correspond to the letters in the top lines of the table. The height to the bottom of the boiler indicated in Fig. 18, I-J, is for the front end of the boiler. The rear end would be  $1\frac{1}{2}$  inches lower. The height of setting given in Table II is the conventional height given by the manufacturers to suit

average conditions. As will be seen later, the height of a boiler from the grates depends upon the kind of fuel to be used, and upon the rate of combustion. The walls enclosing a boiler are on an average 12 inches thick, and are made solid. There is no advantage in leaving a space between the outer and inner courses of brick, as it will neither retard heat materially nor prevent the brickwork from cracking. However, hollow setting walls or furnace wall flues are sometimes provided to heat the air used for combustion, and at the same time keep down the temperature of the walls.

At the rear of the boiler setting is the rear arch, which roofs the space between the back end of the boiler and the brickwork and deflects the flames and hot gases into the boiler tubes. The under side of this arch is just above the top level of the uppermost row of tubes. The back arch of the boiler should be just high enough to clear the top row of tubes. It must be built low enough so that the water level inside the boiler can never fall below that of the arch, which if placed too high will leave a section of tube sheet bare when the water happens to be low in the boiler. The arch must not touch the boiler or the boiler cannot expand without pushing the arch out of true. A lap joint is made to cover the opening to cut down the air leakage. At the sides, just above the middle line of the boiler, the brickwork is corbeled out as shown at A, to close the gap between wall and boiler. From above

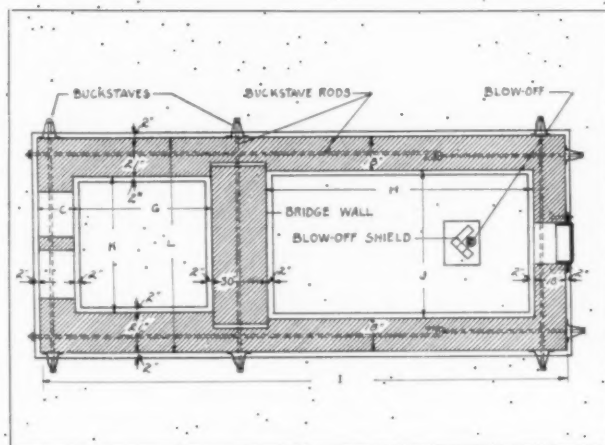


Fig. 17—Plan of Setting for Horizontal Tubular Boiler

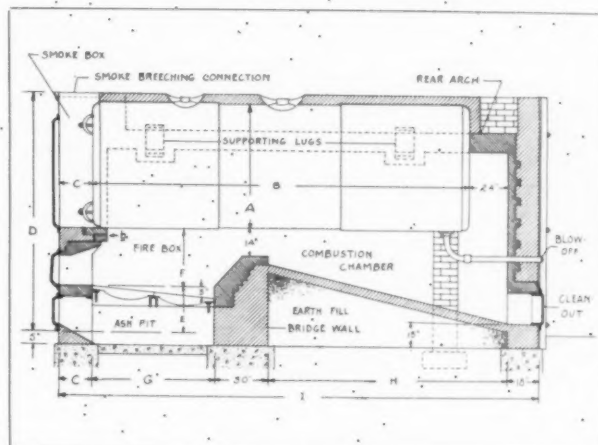


Fig. 18—Longitudinal Section Through Setting for Horizontal Tubular Boiler

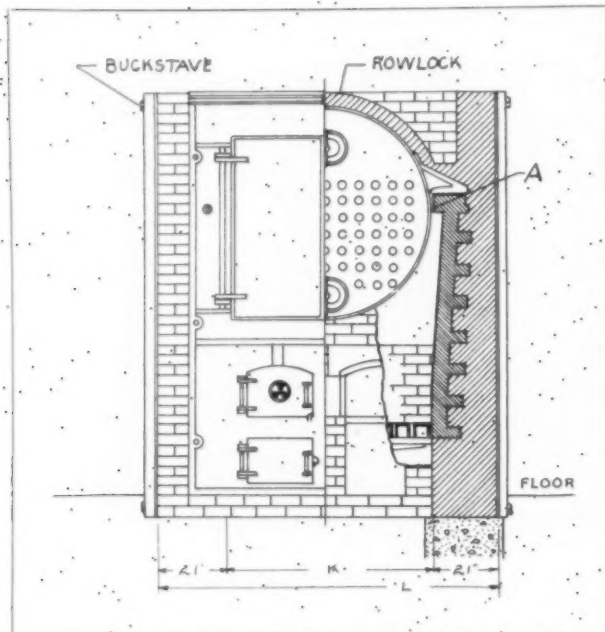


Fig. 19—Half Elevation and Half Cross Section of Typical Boiler Setting

this a single or double rowlock arch is sprung to enclose the boiler at the top, and to prevent leakage of air into the boiler setting or the escape of flames and gas from within. To more effectively insulate the top of the boiler and prevent air or gas leaks, plaster the arch with asbestos cement.

The bridge wall, which partly separates the furnace from the combustion chamber, is built of fire brick and is not bonded to the side walls. It is let into grooves or pockets in the side walls for support, but with sufficient room for the bridge wall to expand without crushing out the side walls or cracking the brickwork. The bridge wall is made independent of the side walls, so it can be torn out and renewed at any time without tearing out part of the side walls. The bridge wall has many functions to perform in the operation of a boiler. It limits the furnace, provides a rest for the grates, and by deflecting the flames, hot gases and air upward it helps to mix and commingle them more thoroughly when passing through the throat or space between the top of the wall and the boiler.

All the walls inside the boiler setting, the bridge wall, inside lining of furnace, combustion chamber and smokebox, are built of fire brick. The firebox lining of fire brick is made 9 inches thick, or two rows of brick, for from 18 to 24 inches above the grates. These brick are laid in stretcher courses with headers every fifth course, so that one row or  $4\frac{1}{2}$  inches of brickwork can be removed when burned out, and there will still be a fire brick backing. New brick can easily be laid up against the inner or second course of fire brick. At the rear of the boiler a V-shaped pier of fire brick is built with the point of the V toward the front. Back of this pier, and protected by it from the direct blast effect of the flames and gases, is the blowoff pipe.

The front brickwork of the boiler setting is pierced with so many openings that the masonry becomes a series of arches and inverted arches. Cast iron door linings, similar to those suggested in Fig. 20, are put in the ashpit openings, and built in with brick. At the height called for in the setting, a dead plate (Fig. 21) is laid across the front wall. This plate has a lip to support the front end of the grate bars. A cast iron lining for the fire doors comes next, over which is sprung an arch of fire brick. Above this arch the wall is corbeled in, as shown at B in Fig. 18, so it will project several inches along the shell of the boiler. An inverted arch is then built, as shown in Fig. 22, and an arch sprung on top of that, thus making a complete circle which forms a smokebox at the front end of the boiler and separates the smokebox from the furnace or firebox. An opening is left at the top of the arch or circle, and this is covered with a stack plate similar to that in Fig. 23, to support the breeching. Inspection will show two grooves, one at each end of the collar upstanding on the stack plate. They are to receive the damper rod, the damper being located at this point in the breeching. Before starting the brickwork, the water column and blowoff pipes are made up in place. An air space is left around those pipes where they pass through the brickwork; then, when the mason work is completed, the air spaces are tightly packed with asbestos, and then pointed with mortar to prevent air leaks. The water column is set so that the lowest gauge cock is 3 inches above the top row of tubes at the front end.

**Firebrick.** There is no doubt that as many setting failures result from poor workmanship as from use of poor materials. It is advisable, therefore, in setting boilers to have it done by masons who have specialized on that class of work. There are two kinds of brick used in boiler settings,—ordinary hard-burned red brick, and fire brick. The red brick are laid up in lime-cement mortar composed of one volume of Portland cement, three volumes of unslacked lime and 16 volumes of clean, sharp sand. Not less than  $2\frac{1}{2}$  bushels of lime are used in laying up 1,000 brick. Each brick is thoroughly embedded, and all joints are filled with mortar to completely fill all crevices through which air might

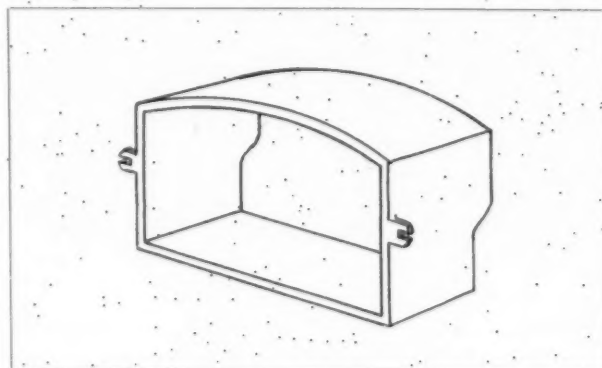


Fig. 20—Ashpit Door Lining

TABLE II  
DIMENSIONS AND BRICK FOR HORIZONTAL TUBULAR BOILER SYSTEMS

HORSE POWER	15	20	25	30	35	40	45	50	60	70	75
A—Diameter of Boiler.....	36	36	36	44	44	44	48	48	54	54	60
B—Length of Boiler.....	8	10	12	10	12	14	12	14	14	16	14
C—Front Wall.....	13	13	13	17	17	17	17	17	18	18	18
D—Floor to Stack Plate.....	7' 2 1/2"	7' 2 1/2"	7' 2 1/2"	8' 2 1/2"	8' 2 1/2"	8' 2 1/2"	8' 11 1/2"	8' 11 1/2"	9' 9 1/2"	9' 9 1/2"	10' 2"
E—Floor to Dead Plate.....	24	24	24	24	24	24	24	24	24	24	24
F—Grates to Boiler.....	28	28	28	28	28	28	28	28	36	36	36
G—Length of Ashpit.....	36	36	42	42	42	48	48	48	48	54	54
H—Combustion Chamber.....	4' 6"	6' 6"	8' 0"	6' 0"	8' 0"	9' 6"	7' 6"	9' 6"	9' 6"	11' 6"	9' 0"
I—Length Over All.....	12' 7"	14' 7"	16' 7"	14' 11"	16' 11"	18' 11"	16' 11"	18' 11"	19' 0"	21' 0"	19' 0"
J—Width Comb. Chamber.....	42	42	42	50	50	50	54	54	60	60	66
K—Width of Furnace.....	36	36	36	44	44	44	48	48	54	54	60
L—Width Over All.....	6' 6"	6' 6"	6' 6"	7' 2"	7' 2"	7' 2"	7' 6"	7' 6"	8' 0"	8' 0"	8' 6"
No. of Fire Brick, Single.....	725	800	960	1000	1100	1200	1284	1500	1800	2080	1940
No. of Red Brick, Single.....	6000	6800	7600	7300	8760	10200	9300	10800	11200	12800	12200
No. of Fire Brick for Battery.....	1450	1600	1920	2000	2200	2400	2568	3000	3600	4160	3880
No. of Red Brick for Battery.....	8200	11500	12800	12100	14680	17200	15375	18000	18400	21200	20400

HORSE POWER	80	90	100	115	125	150	175	175	200	200	225
A—Diameter of Boiler.....	60	60	66	66	72	72	72	78	78	84	84
B—Length of Boiler.....	16	18	16	18	16	18	20	18	20	18	20
C—Front Wall.....	18	18	18	18	18	18	18	18	18	18	18
D—Floor to Stack Plate.....	10' 2"	10' 2"	10' 8"	10' 8"	11' 2"	11' 2"	11' 2"	11' 7"	11' 7"	12' 1"	12' 1"
E—Floor to Dead Plate.....	24	24	24	24	24	24	24	24	24	24	24
F—Grates to Boiler.....	36	36	36	36	36	36	36	36	36	36	36
G—Length of Ashpit.....	54	60	60	66	66	72	78	78	78	72	78
H—Combustion Chamber.....	11' 0"	12' 6"	10' 6"	12' 0"	10' 0"	11' 6"	13' 0"	11' 6"	13' 0"	11' 6"	13' 0"
I—Length Over All.....	21' 0"	23' 0"	21' 0"	23' 0"	21' 0"	23' 0"	25' 0"	23' 0"	25' 0"	23' 0"	25' 0"
J—Width Comb. Chamber.....	66	66	72	72	78	78	78	84	84	90	90
K—Width of Furnace.....	60	60	66	66	72	72	72	78	78	84	84
L—Width Over All.....	8' 6"	8' 6"	9' 0"	9' 0"	9' 6"	9' 6"	9' 6"	10' 0"	10' 0"	10' 6"	10' 6"
No. of Fire Brick, Single.....	2230	2435	2350	2540	2650	2980	3300	3020	3360	3400	3780
No. of Red Brick, Single.....	13000	14400	13800	15000	14800	15600	16700	16400	18500	18000	20000
No. of Fire Brick for Battery.....	4460	4870	4700	5080	5300	5960	6600	6040	6720	6800	7560
No. of Red Brick for Battery.....	21600	23970	22700	24687	23700	25900	27600	27235	30950	30200	33700

penetrate. Where red brick and fire brick are used in the same wall, they are carried up together and bonded at every sixth course, excepting in the furnace, as was previously pointed out, where every fifth course is a header course. Under no consideration is fire clay to be mixed with the cement mortar for laying red brick.

Fire brick are not laid in mortar; they are laid in fire clay, and the fire clay is not buttered on to

bed the brick in, as is the case with mortar and common brick. Fire brick must be dry and protected from moisture until used. The fire clay for laying fire brick is mixed to the consistency of a batter. Each brick is dipped into this thin fire clay wash or slip on the one side and the two edges which will give contact with the others in the wall; it is then rubbed and shoved into place and tapped with a wooden mallet until it touches the brick next

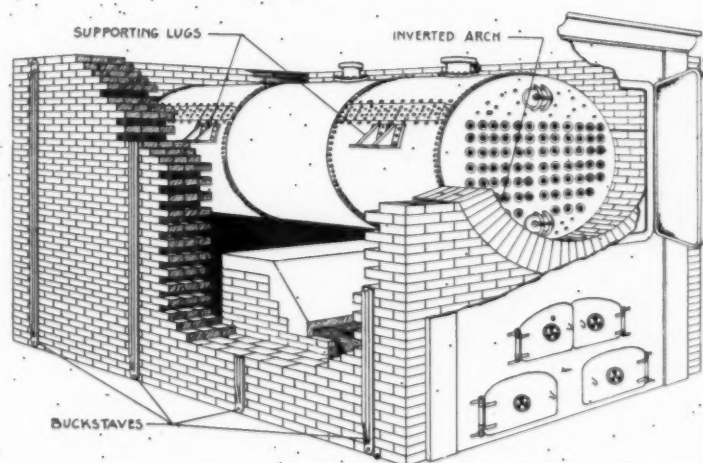


Fig. 22—Inverted Arch at Boiler Front

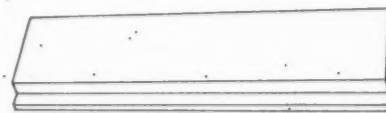


Fig. 21—Dead Plate



Fig. 23—Stock Plate for Breeching Support



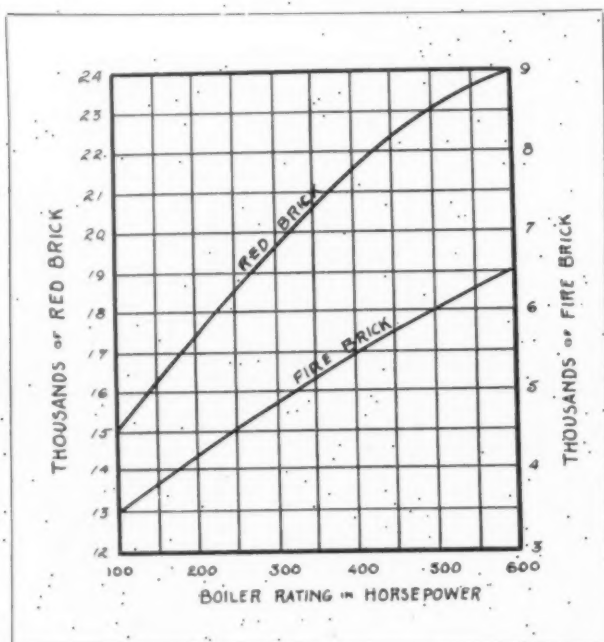


Fig. 24—Brick Required for Water Tube Boiler Settings

below it. Fire clay is not a cement, and it has little or no holding power. Its action is that of a filler rather than a binder, and it is too thick to use when it can be handled with a trowel. It is well to use with fire brick a fire clay furnished by the manufacturer of the brick, having the same qualities.

All parts of a boiler setting in contact with flames or hot gases must be faced with or built of fire brick or some equally refractory material, capable of withstanding the high temperatures they will be subjected to. The brickwork of the ashpit in hand-fired boilers may be of red brick, but in stoker-fired boilers the ashpit lining must be of fire brick.

Furnace temperatures in power boilers will range from 2,800 to 3,200° Fahr., and many refractory materials used for furnace linings melt under or at those temperatures. However, in practice, a fire brick is never heated to the temperature of the furnace. That is, the temperature of the brick mass as a whole is far below the furnace temperature, and only about 10 per cent of its cross section nearest the fire even approaches the furnace temperature. According to the United States Bureau of Standards, the melting points of fire bricks are thus: The most common fire brick, or those made of clay, of which the main ingredient is kaolin, will melt at a temperature ranging from 2,831 to 3,137° Fahr.; bauxite brick, at from 2,949 to 3,245°; silica brick, at from 3,092 to 3,101°; chromite brick, at 3,722°, and magnesia brick at 4,929°.

While fire brick or bauxite, silica, chrome magnesia or dolomite have melting points higher than fireclay, they have not proved satisfactory in boiler practice. They do not withstand sudden heating, cooling, pressure and action of the gases and ash. Under sudden changes of temperature they spall and break off in large pieces. The best fire brick

for boiler settings are made of fire clay, and the best fire brick are made from the fire clays of Pennsylvania; south and west of Pennsylvania the fire clay becomes poorer as the distance increases, some of the southern fire clays containing a considerable percentage of iron oxide, which is objectionable.

The plasticity of fire brick is more important than the melting temperature from a boiler-setting standpoint. Plasticity means the tendency of a fire brick to become plastic and flow at a temperature lower than the melting point, so it will become deformed under a given load. Under a unit stress of 100 pounds per square inch, the plastic point must be 2,400° Fahr. or higher to be used at all, and 2,800° Fahr. to give satisfactory service. In mechanically-stoked furnaces, the lining can be made stronger or more durable by using special blocks instead of the standard fire brick. The approximate number of red brick, also of fire brick, required for a Heine standard water-tube boiler can be determined by means of the chart, Fig. 24.

If fire clay is not of the best quality it will melt and run long before the brick softens. Common sand, salt and lime hasten fusion and cement the brick throughout, but at high temperatures this fusion destroys the brick prematurely. The addition of only 5 per cent of Portland Cement, asbestos or salt will lower the fusion point of the clay almost 400° Fahr. Fire sand, which is a finely ground calcined fire clay, or powdered fire brick, can be added to the mortar. This fire sand, having already been fired, has reached its full shrinkage, and helps to hold the brick arch in place, even when the plastic fire clay shrinks, thereby tending to loosen the brick. There are several commercial cements which withstand temperatures at as high as 3,100° Fahr. which are suitable for use with high grade fire brick, such as are used in this work.

*Putting the Boiler in Service.* When the setting is completed, the boiler is filled with water and the manhole at the top of the boiler left open. A strong solution of soda ash (50 to 60 pounds for a 150-horse-power boiler) is added to the water to cut the oil and grease. If the boiler is to stand idle for some time, the water is drained out, and the lower and upper manholes are left open, so there will be a circulation of air through the inside. If that is not done the boiler will sweat and corrode, and be in worse condition than if it had been operated continuously.

The best way to dry out a boiler setting is to block open the boiler damper and the ashpit doors as soon as the brickwork is completed, and in this way maintain a free circulation of air through the setting. If possible this preliminary drying should be continued for several days before any fire is placed in the furnace. When ready for the drying-out fire, a light fire is started with wood, and gradually built up as the walls become warm. After the walls have become thoroughly heated, coal is fired, and the boiler is then put into active service.

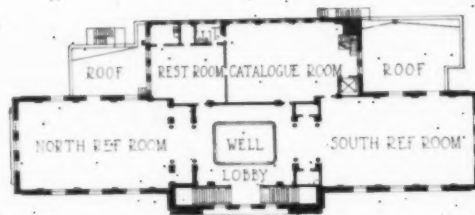


FRONT ELEVATION

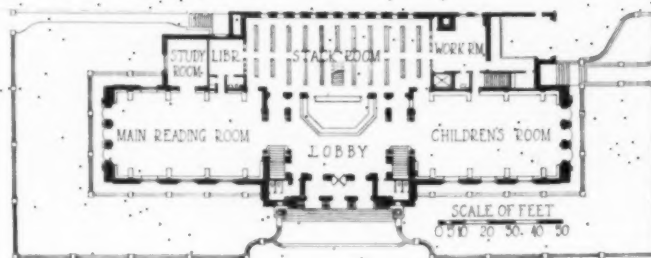


*Plans on Back*

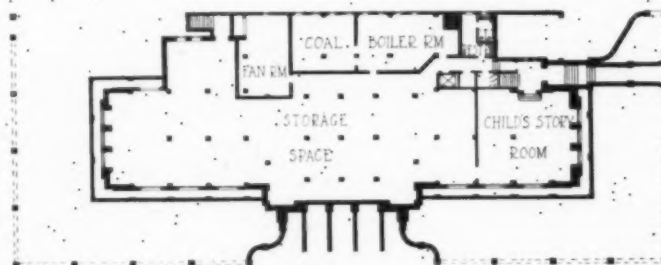
MAIN READING ROOM  
BUILDING FOR BRANCH OF THE CHICAGO PUBLIC LIBRARY  
ALFRED S. ALSCHULER, ARCHITECT



SECOND FLOOR



MAIN FLOOR



BASEMENT

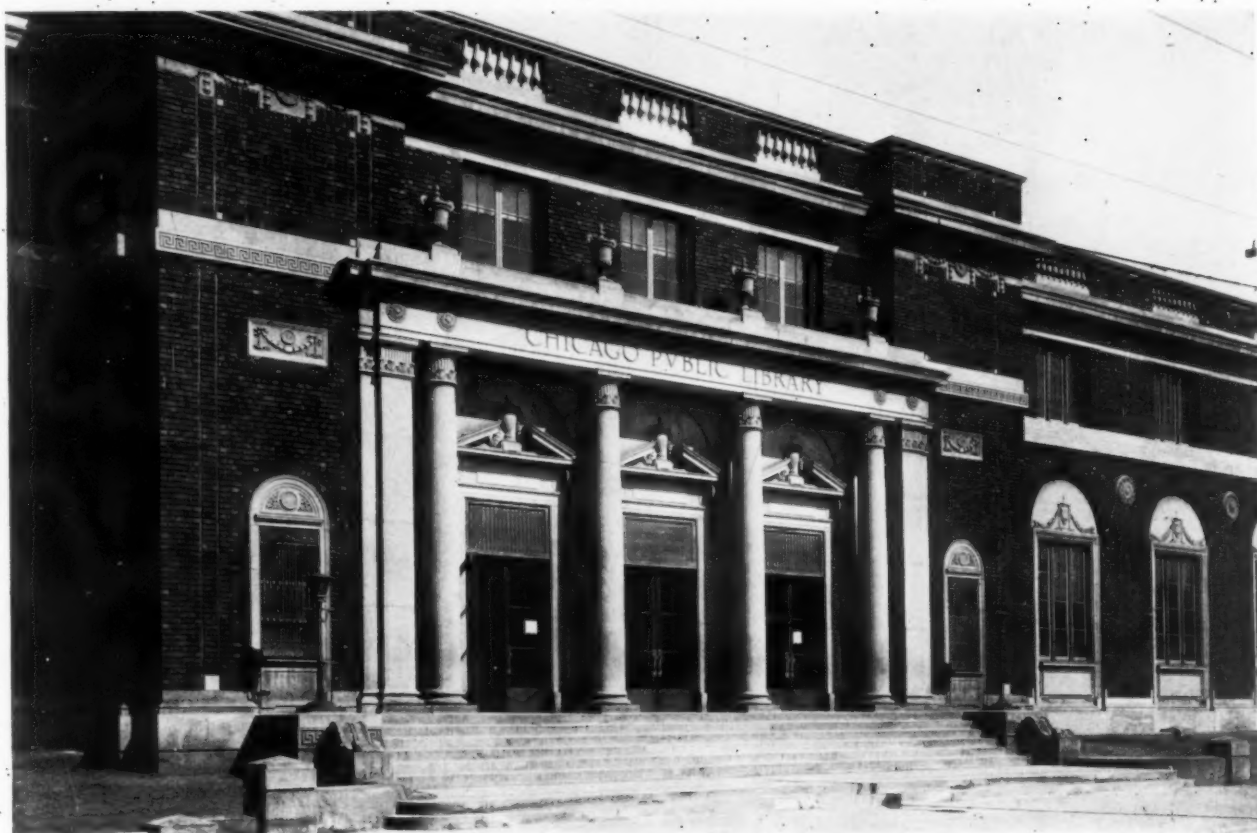
PLANS, BUILDING, FOR BRANCH OF THE CHICAGO PUBLIC LIBRARY

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DETAIL, END ELEVATION



MAIN ENTRANCE

BUILDING FOR BRANCH OF THE CHICAGO PUBLIC LIBRARY.  
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LOBBY, STAIRS AND ENTRANCE DOORS



DISTRIBUTION DESK IN LOBBY  
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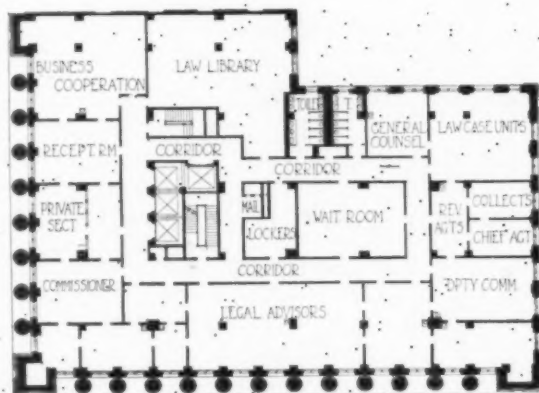
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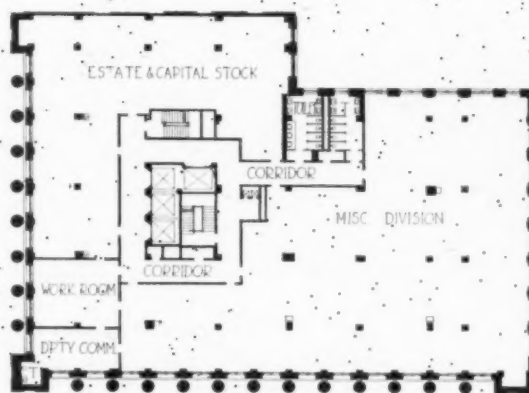
Plans on Back

UNITED STATES TREASURY ANNEX, WASHINGTON  
CASS GILBERT, ARCHITECT

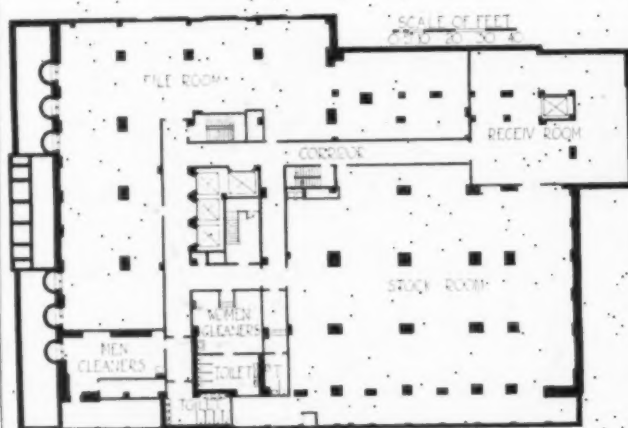
Photos, John Wallace Gillies



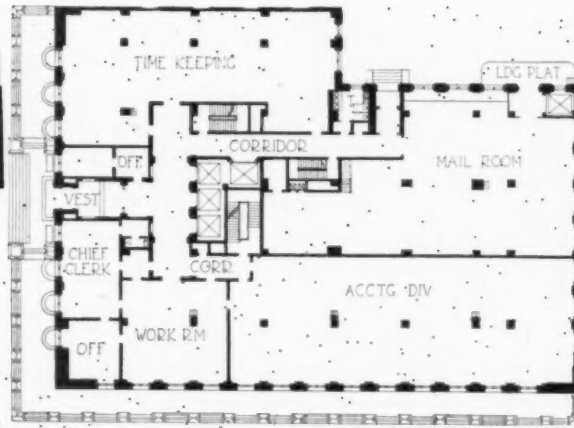
SECOND FLOOR



THIRD FLOOR



BASEMENT



FIRST FLOOR

PLANS, UNITED STATES TREASURY ANNEX, WASHINGTON

CASS GILBERT, ARCHITECT





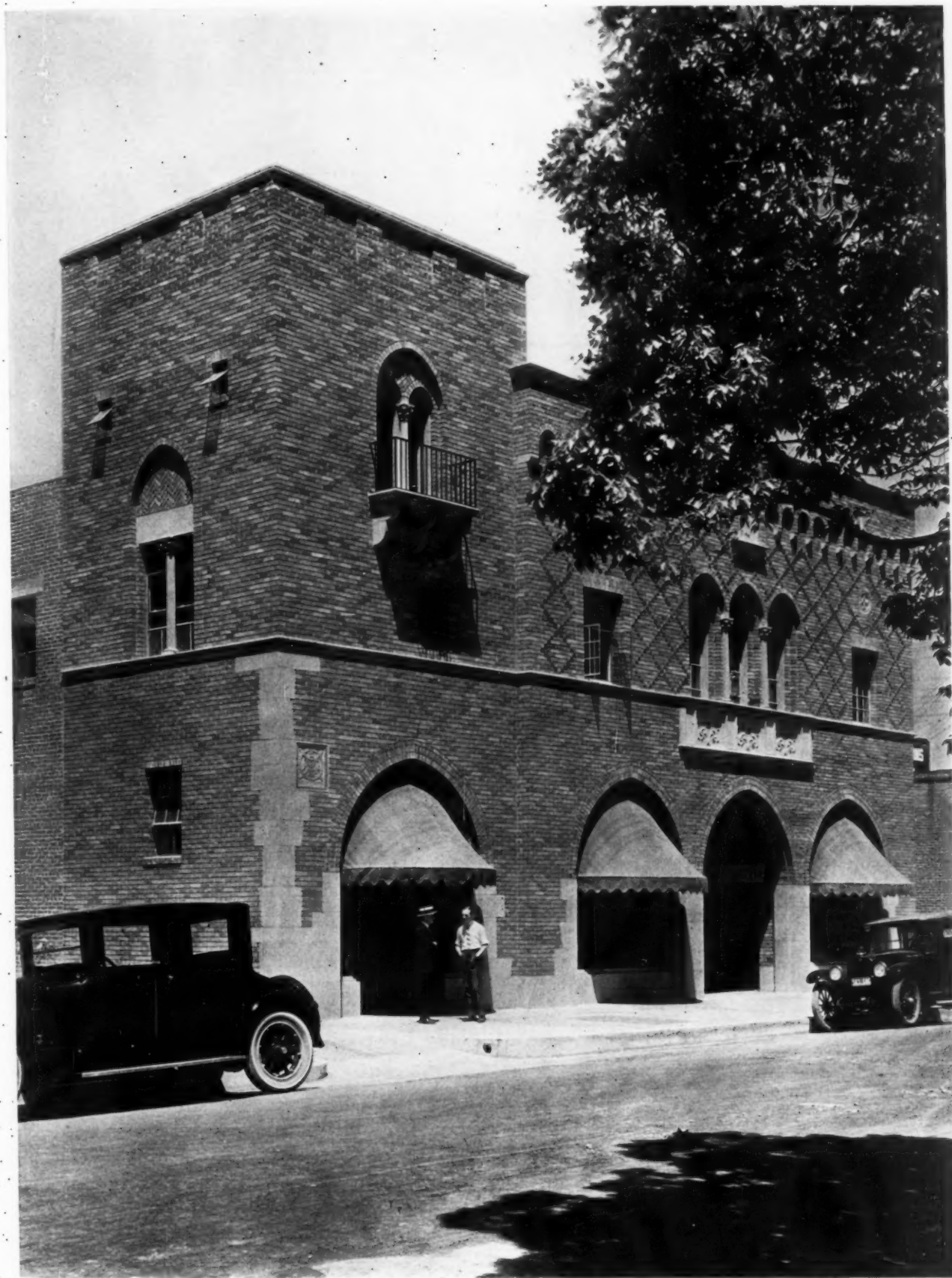
DETAIL, SIDE ELEVATION



MAIN ENTRANCE ON MADISON PLACE

UNITED STATES TREASURY ANNEX, WASHINGTON  
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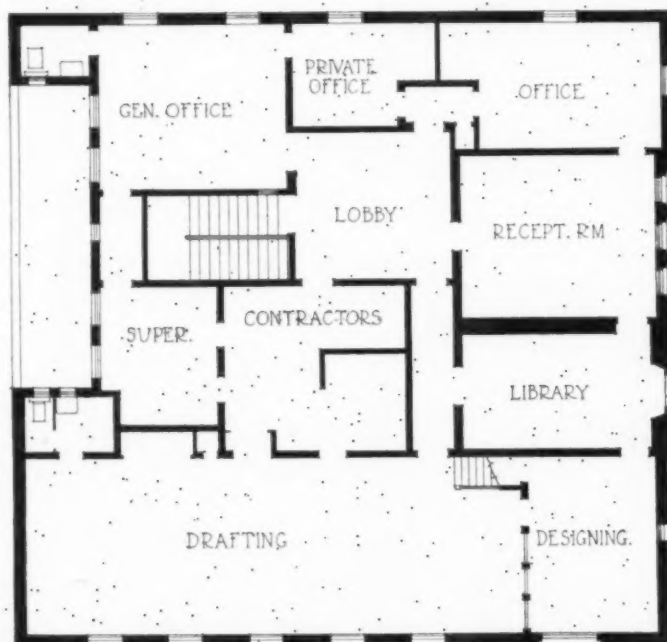


*Photos. Bryan-Brandenburg Co.*

THE G. L. MORRIS BUILDING, PASADENA  
MARSTON, VAN PELT & MAYBURY, ARCHITECTS

*Plan on Back*





SCALE OF FEET  
0 5 10 15

# PLAN, OFFICES OF MARSTON, VAN PELT & MAYBURY, ARCHITECTS

IN THE G. L. MORRIS BUILDING, PASADENA, DESIGNED BY THEM

Editor's Note. Through an unfortunate oversight there was omitted from THE ARCHITECTURAL FORUM for June any mention of the fact that this charming small office-building in Pasadena, designed by Marston, Van Pelt & Maybury, served as the inspiration for the color sketch of an ideal small motion picture theater, drawn by Howard Moise and used as the cover design.



*Photo. John Wallace Gillies*

MEMORIAL TO THE FIRST DIVISION, WASHINGTON  
CASS GILBERT, ARCHITECT

Architectural  
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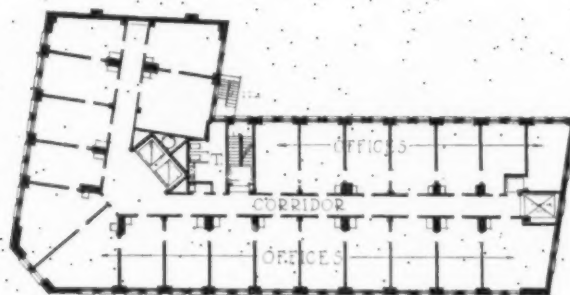




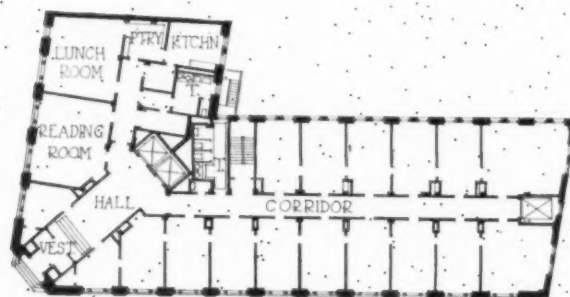
Photo. W. S., Keith

MEDICAL ARTS BUILDING, MONTREAL.  
ROSS & MACDONALD, ARCHITECTS

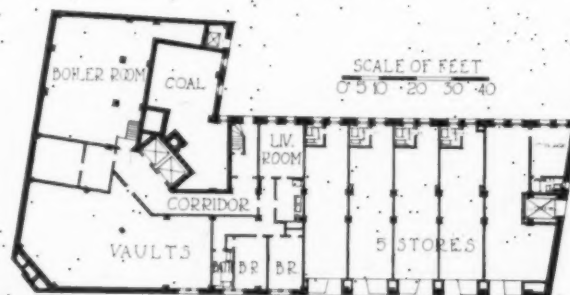
Plans on Back



A TYPICAL FLOOR



FIRST FLOOR



BASEMENT FLOOR

PLANS, MEDICAL ARTS BUILDING, MONTREAL

ROSS & MACDONALD, ARCHITECTS

## Warbrook, Eversley, Hampshire

By HAROLD DONALDSON EBERLEIN

WARBROOK, at Eversley in Hampshire, claims our interest and attention on four counts. First of all, its own intrinsic beauty commends it to our favorable regard, and its fidelity as an exponent of one particular phase of the English domestic style of the period (a phase none too plentifully represented) renders it worthy of close study. In the second place, it is a choice example of a somewhat unusual thing,—a moderate sized house in the “grand” manner. Next, it is virtually intact, and has not suffered those numerous character-destroying changes and mutilations to which so many of the houses of its day have at some time or other fallen victims. Last, but by no means least, it is the home that an eminent architect of the early eighteenth century built for *himself*, and, therefore, it faithfully embodies his notions of what was fitting in domestic style. It is an index of his taste, peculiarly sincere and trustworthy because there was no element of clients’ tastes or prejudices injected into it to injure it.

The epitaph on the tablet in Eversley Church, close by, tells us that John James, eldest son of the Reverend John James, Rector of Stratfield Turgis, “built the house called Warbrook in the parish, anno 1724,” and died there in May, 1746, aged 74. “James of Greenwich,” in 1705, succeeded Nicholas Hawksmoor as Clerk of the Works at Greenwich

Hospital, and his intimate connection with Greenwich continued for 40 years, hence the title by which he is usually known. This post he held under Sir Christopher Wren, Sir John Vanbrugh, Colin Campbell and Thomas Ripley. In 1725 he was called “Surveyor,” but as he did not actually hold that office at Greenwich, the mention is to be interpreted as a contemporary acknowledgment of his responsibility and capacity in the discharge of his duties rather than as an exact or precise official definition.

James’ first independent work of consequence was undertaken in 1710 when he designed for the Honorable James Johnstone—the “Mr. Secretary Johnstone” at whom Pope aimed his shafts of satire—the house at Twickenham that long afterwards came to be known as “Orleans House,” because of its connection with the exiled royal family of France. In the following year, 1711, Jennings, the “master carpenter” at St. Paul’s, was removed by the commissioners who appointed James to succeed him at a stipend of £200 a year. The position created for James seems to have been a superintendency of the final work on the cathedral, and the appointment was presumably acceptable to Sir Christopher Wren, whose wishes, however, were often thwarted by the commissioners. At any rate, it was the beginning of a long connection with St. Paul’s for, in 1716, James became “Assistant Sur-



West Front of House from the Canal, Warbrook.





Marble Mantel in Dining Room



Dining Room Walls, Marbleized in Tones of Rose



Fireplace in the Hall



Side Wall in Hall



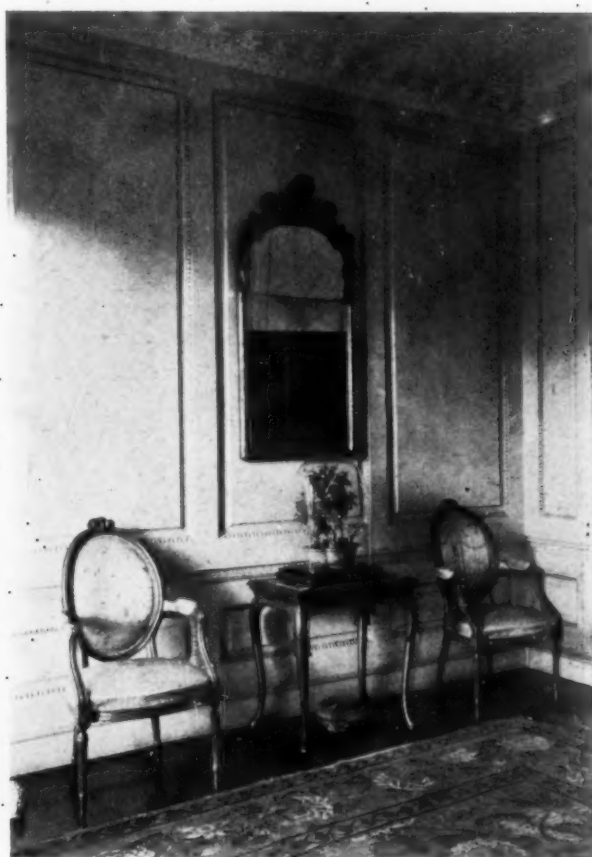
Bedroom with Old Chinese Wallpaper



Fireplace End of Drawing Room



Stairway from Upper Hall



Drawing Room Is Painted Greenish Blue

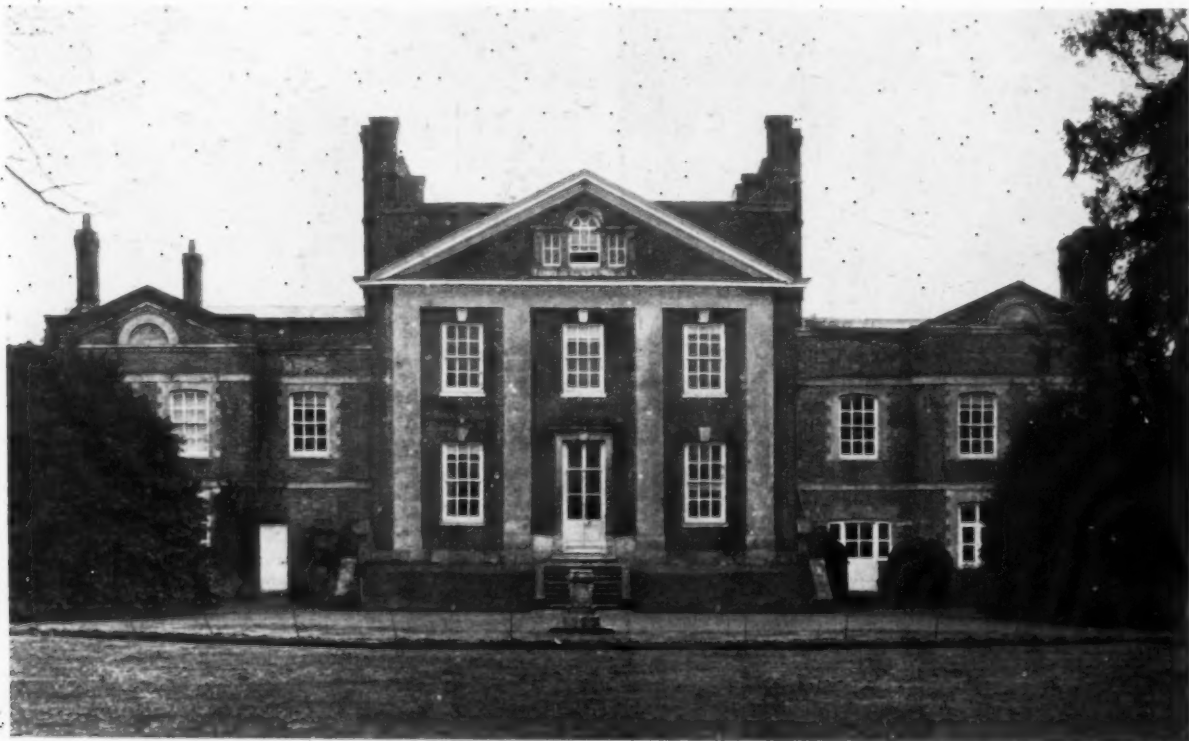
veyor," along with Hawksmoor, and retained the surveyorship of the cathedral till the end of his life.

So far as the exterior of Warbrook is concerned, there is strong individuality resulting from an eclecticism in which it is possible to trace how James combined elements derived both from Dutch usage and from the more highly organized manner of Wren, without altogether overlooking the claims of that precise Palladianism which was then completely filling the architectural horizon. The general aspect of the composition is reminiscent of Batavian precedent, especially the up-springing, high-shouldered part of the central pavilion with its grouping of chimneystacks. Compare the east front with some of the elevations in Vingboon's book, and it will readily be seen how the influence of that once popular publication had left its impress upon the architect's mind. The restraint and calm, reposeful vigor are Wren's, and so likewise are some of the details. The banded architraves and arc-shaped heads of the windows in the wings recall French usage of a somewhat earlier day, while no very searching scrutiny is needed to detect evidence of a more than incipient Palladianism. A certain type of Dutch bluntness is plainly expressed in the four pilasters on each front of the central pavilion, pilasters without capitals, and supporting an entablature devoid of members and mouldings. Pilasters and entablature, in fact, are nothing but broad, flat bands projecting several inches beyond the brick face of the wall. This unusual feature of the design is trenchantly effective in its strong and elemental simplicity, and should find favor among the adherents of one professedly modern school. Incidentally, the

treatment exemplified shows that it is not necessary to sacrifice architectural good manners in order to be frank and forceful. From whatever sources John James may have drawn divers items of inspiration, he combined and blended them according to his own original way of thinking, and in so doing he produced a virile, free and independent expression of domestic architecture invested with both urbanity and distinction as well as strong character.

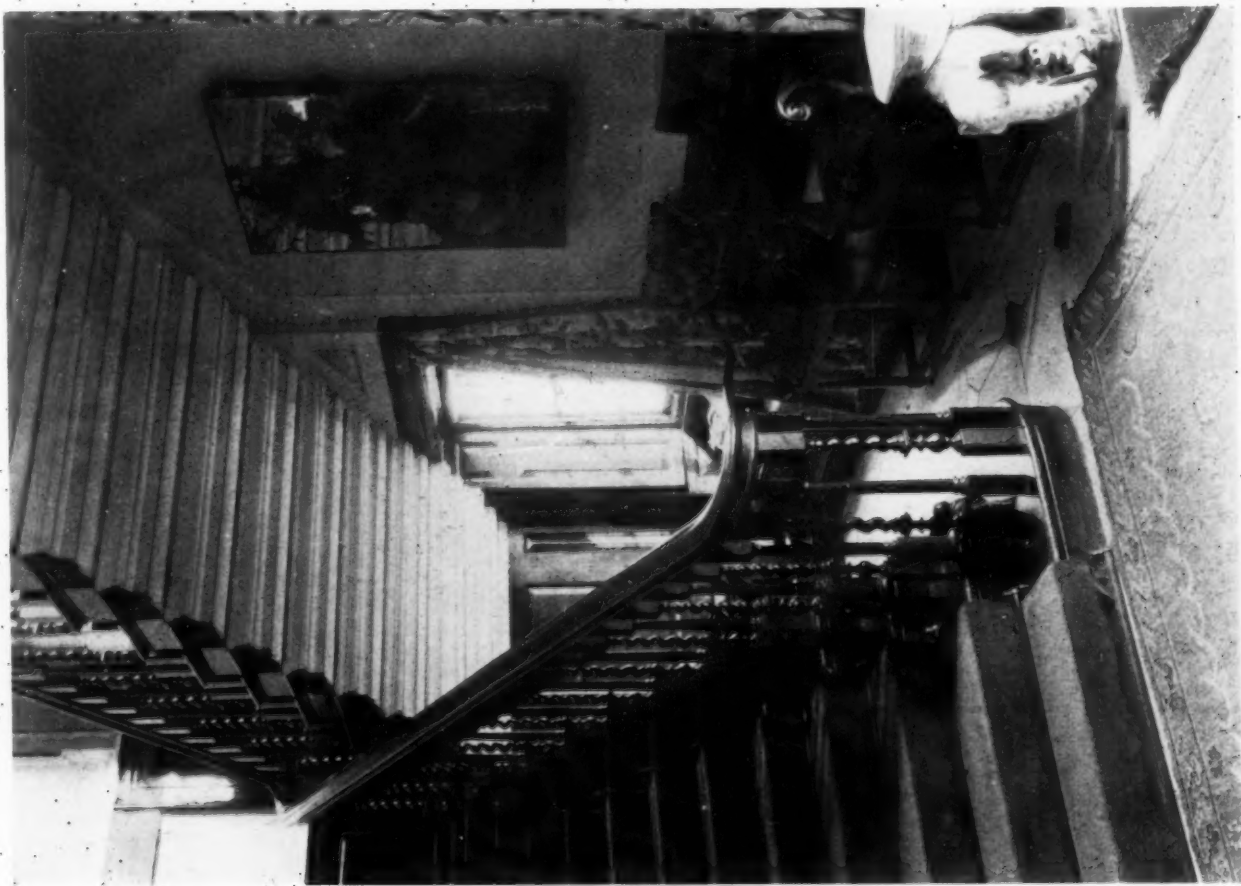
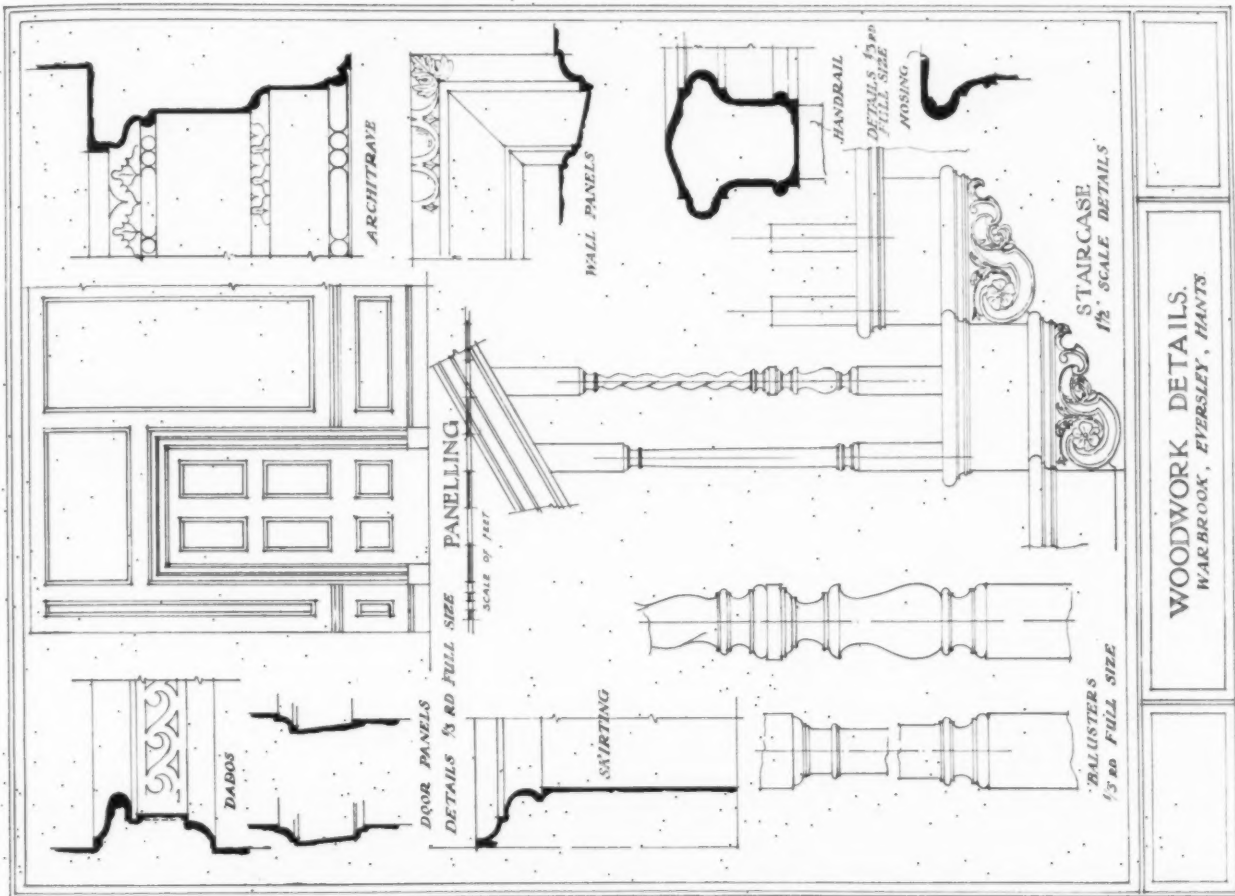
The interior of Warbrook testifies to James' good judgment on the score of decoration. The plasterwork, which is all coeval with the building, is especially noteworthy, particularly that which adorns the walls and ceiling above the staircase. The staircase itself, with its alternating fluted and spiral wooden spindles, the paneling of the walls, and all the other details of the woodwork, deserve careful examination. In the hall and in the dining room the fireplaces likewise are indicative of James' reticent yet robust manner. The grate in the dining room, it should be mentioned, though old, is of later introduction. When the brothers Adam were engaged, long after James' death, to make some decorative changes, they confined their efforts almost entirely to several of the bedrooms, and allowed most of James' work to remain untouched. The Rococo fireplace in the drawing room, the marble fireplace in the garden room, and the Chinese wall-paper in one of the bedrooms of the north wing were additions made when the house was restored for W. B. E. Ranken, Esquire, the present owner.

When Richardson & Gill undertook the restoration of Warbrook the fabric was in an almost derelict condition, and not only was it necessary to carry

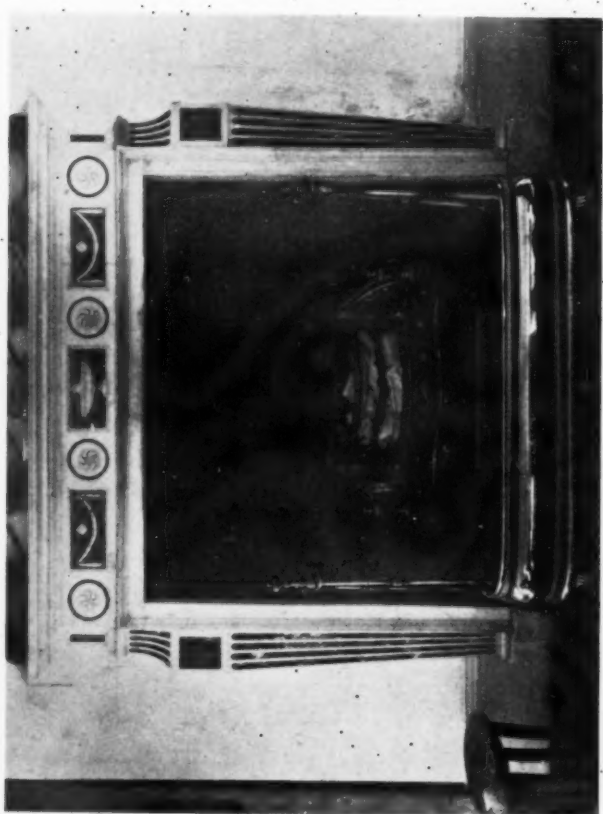
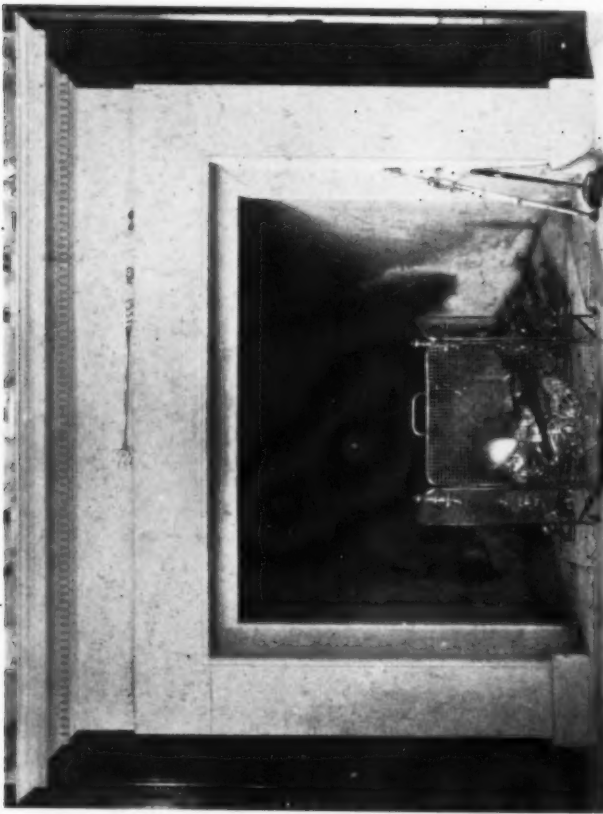
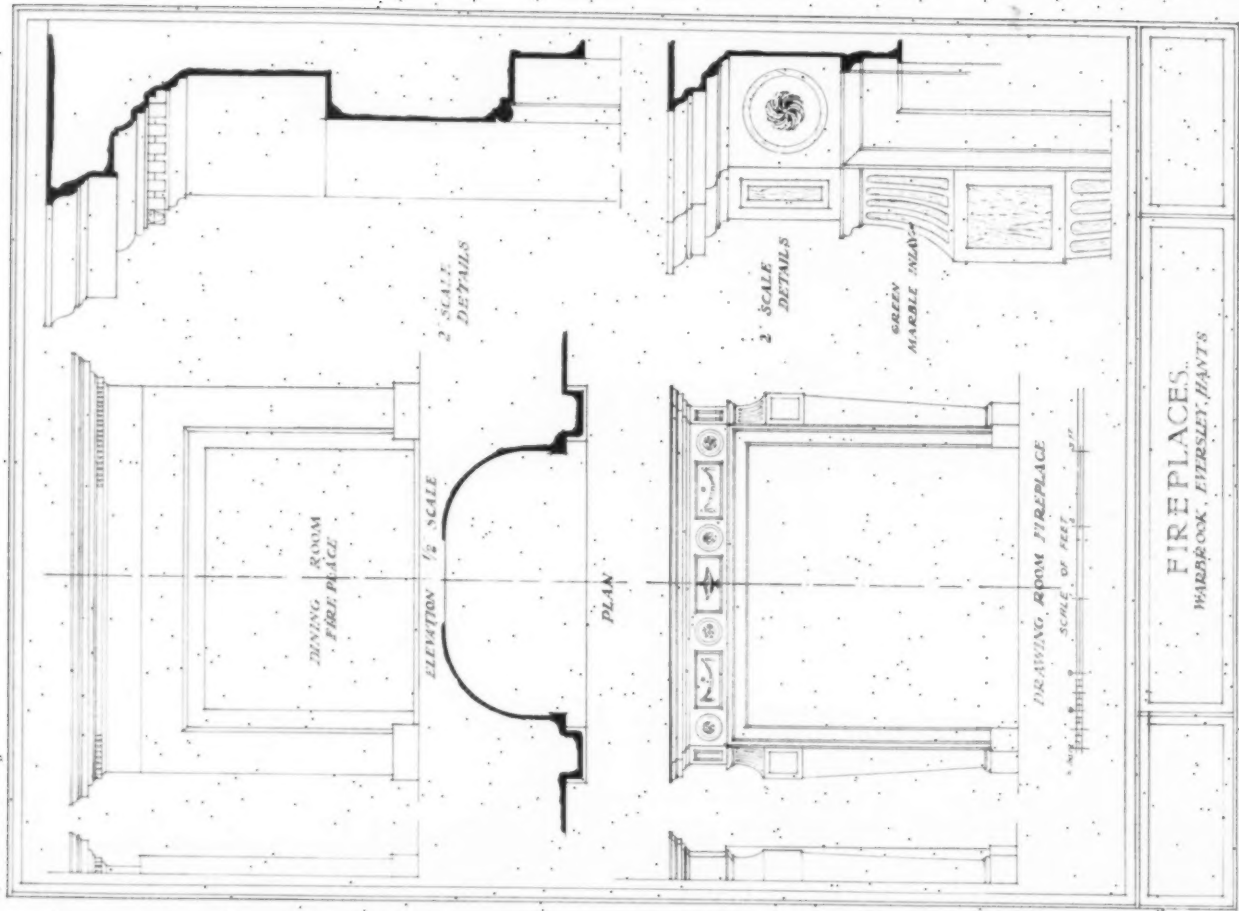


East Front, Warbrook, Eversley, Hampshire

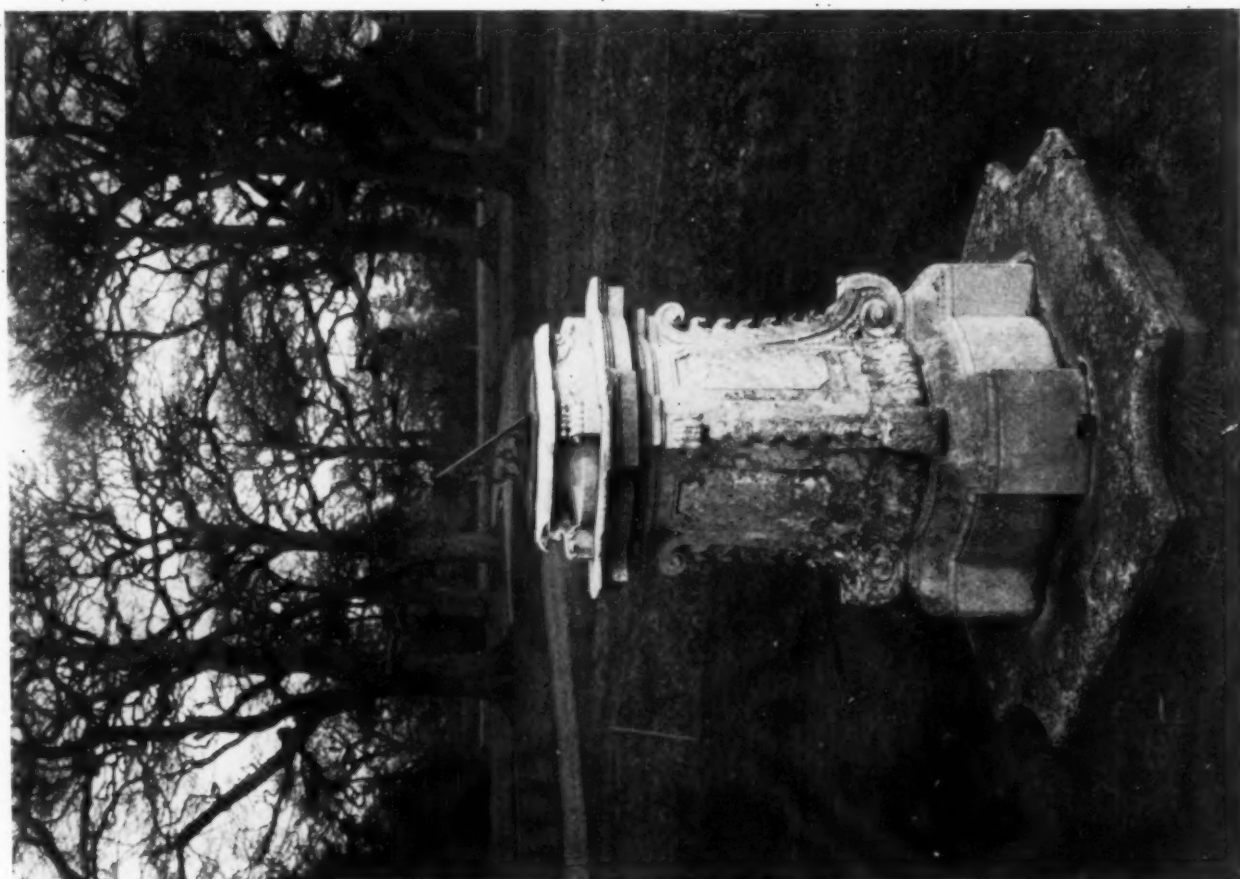
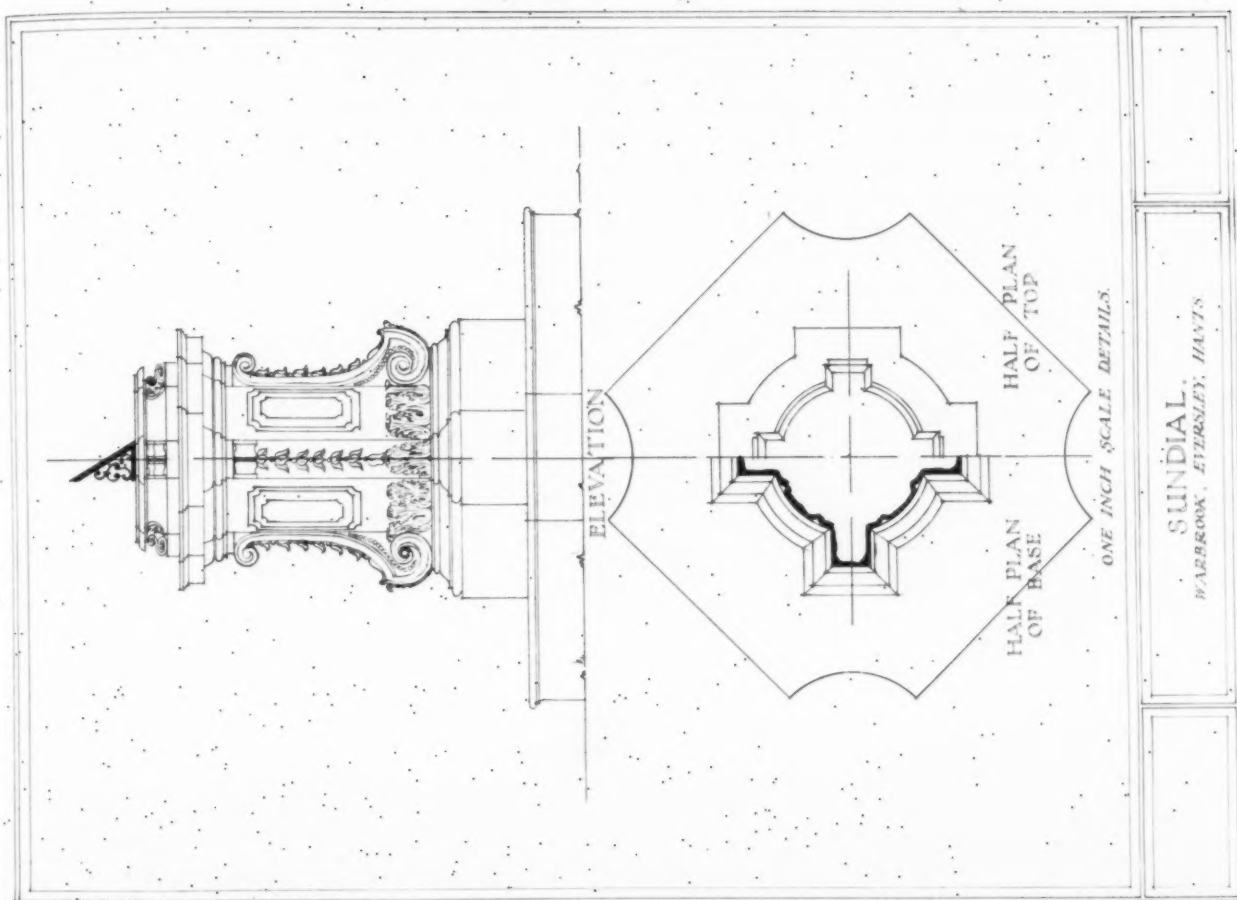




VIEW OF HALL AND DETAILS OF WOODWORK, WARBROOK



TWO FIREPLACES AND THEIR DETAILS, WARBRICK



SUNDIAL AT EAST FRONT OF HOUSE, WARBOOK



out a conscientious replacement of such items as sashing and glazing, which had been ruthlessly altered years before, but extensive repairs were also imperative. Among other things, there had been a good deal of tampering with old floor levels in the south wing, and this involved virtual reconstruction in that quarter. Fortunately, the old stable court with its surrounding buildings had not been interfered with, but elsewhere endless work of an exacting and often minute nature was entailed in order to bring the house and its environment back to their original condition and aspect. The restoration, meticulously performed, was really exemplary *restoration* and not remodeling masquerading as restoration, and Warbrook is now as its designer would have left it. Only one minor building was added.

It is significant that James felt a deep concern in all matters appertaining to garden design, and that he endeavored to put into practice at Warbrook the principles he advocated in print. In substance, he realized what some architects and a great many laymen in America apparently fail to grasp when they seek to discover the peculiarly distinctive element of charm in rural British domestic architecture,—that the garden scheme is an inseparable part of the plan, and that garden and house together form an indivisible composition that cannot be sundered without the gravest consequences. However, this failure of perception is scarcely to be wondered at when one sees the hasty and superficial way the majority of Americans "do" rural England, at high speed without pausing a sufficient space of time to drink in and analyze the essence of that charm they profess so much to admire and consider so important.

Of the old formal garden, to the south of the house at Warbrook, there are no traces left. Its place has been taken by a box-planted, gravel-pathed parterre of modern origin, devised to atone so far as possible for the irreparable damage wrought in the days when the "naturalistic" enthusiasts were at the height of their power. A better fate, fortunately, befell the canals that bound the green, to the north of the house, and the long pool whose reflections enliven the vista through the woodland commanded by the windows of the north front. In James' translation of Le Blond's book occurs this passage: "Fountains and water are the soul of a garden, and make the principal ornament of it."

In the planning of his canals James consistently reflected contemporary continental influence in a dignified, pleasant and reasonable fashion without any of those whimsical exaggerations and overwrought mannerisms that eventually caused a revulsion of feeling and paved the way for the downfall of organized form in garden design when "Capability" Brown began his mischievous crusade to convert the erstwhile ordered beauties of English gardens into incoherent muddles of artificial savagery. In the scheme of radial clearings cut through the screen of woods on each side of the long pool may be seen the same temperate interpretation of the principles enunciated by Le Blond as in the arrangement of the water features. The water scheme and the radial clearings are fully set forth in the plan prepared by Richardson & Gill when they undertook the restoration of Warbrook. The canals had been partly filled up, but they have now been cleared and are restored to their pristine condition.



Stables, Warbrook, Eversley, Hampshire

# SMALL BUILDINGS

## The Architecture of the Small Shop

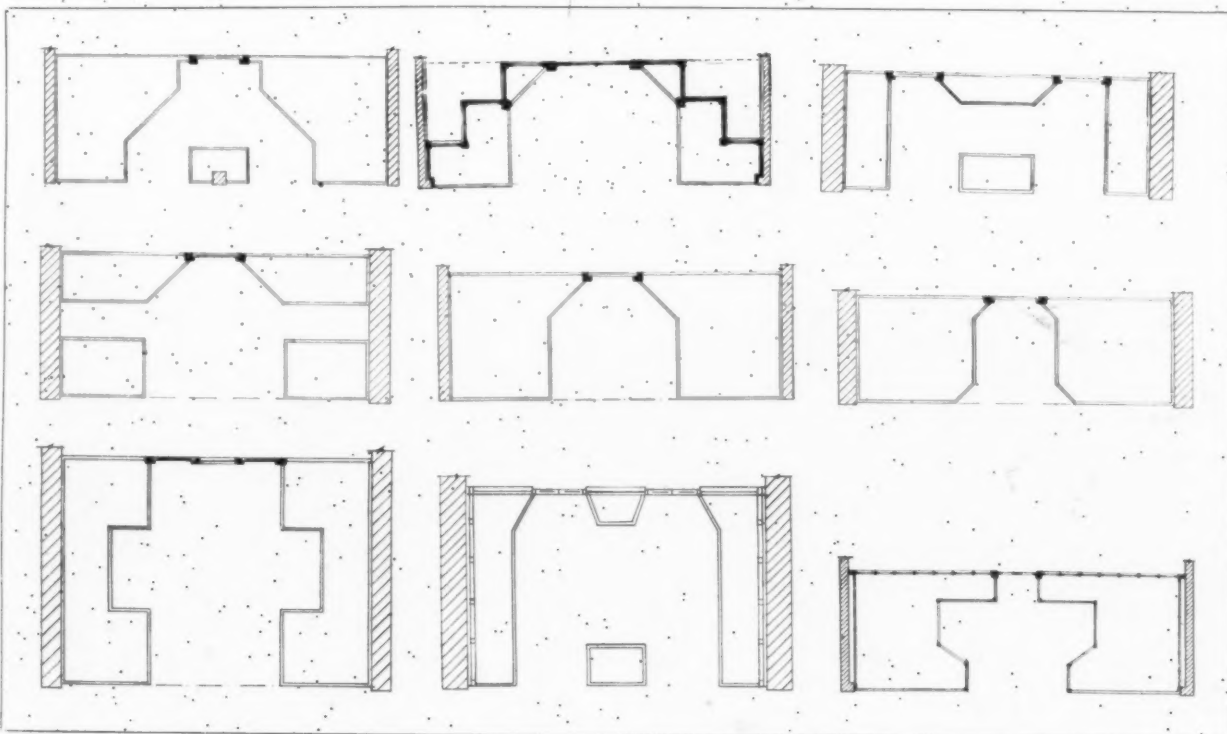
### PART II. INCREASING DISPLAY FRONTAGE BY THE USE OF METAL AND GLASS WINDOWS

EDITOR'S NOTE. Part I of this series of articles, entitled "Design Derived from Period Precedent," appeared in the February, 1925 issue of THE ARCHITECTURAL FORUM.

FROM the standpoint of the architect, the problem of designing display fronts for small stores and shops is divided into two basic parts. The first of these, as dealt with in the earlier article of this series, is primarily a problem of architectural design in which the shop front as an integral part of the facade composition is to be architectural in its nature, with opportunities for the actual display of goods as perhaps a feature secondary to the pleasing appearance of the exterior. For stores and shops of this nature the fronts are usually developed from designs based on a period precedent, and are often composed of carefully detailed architectural entrances with window surfaces broken into small panes and recesses. The second part of the problem is to provide large

areas of unbroken display window space, or to provide recessed or arcaded shop fronts when extensive displays are required for comparatively narrow lot frontages common in cities and towns.

The great increase in land values throughout the commercial districts of larger cities and towns has brought about a condition under which the area of the individual store or shop has been reduced to the minimum, particularly the width of its frontage. At the same time requirements for almost all types of merchandise display have grown, so that the natural solution of the problem has been the development of carefully planned shop windows; such as the several suggested in the small sketches presented herewith. It will be noted that in each instance an effort has been made to increase the actual footage available for display windows, and that by well planned recesses and the use of the so-called "island" show windows it is



A Few of the Many Practical Planning Methods Which Are Possible with the Use of Metal and Glass Windows and Which Provide Greatly Increased Linear Footage of Show Windows for Smaller Shops and Stores

possible to obtain a display frontage of three or four times the number of linear feet represented by the actual width of the store. The introduction of practical types of metal store fronts, in the construction of which large sheets of plate glass are held in position by specially designed metal mouldings or muntins, has made possible the provision of attractive, efficient store fronts, in which full advantage can be given to the display requirements. From the merchandising point of view, and also from that of reducing the depreciation and breakage factors, these metal and glass store fronts are unquestionably far better than anything else which has yet been devised to serve this purpose.

A careful study of this flexible method of designing shop fronts will indicate to the architect several points which might be overlooked in a hasty examination. In the first place, there are available in stock many well designed metal mouldings which can be incorporated in either the simple or the complicated shop front design. Show windows of all sizes and shapes can be built up according to the architect's wishes, and with the

recessed effects which are possible there is no limit to the practical carrying out of almost any architectural scheme, with several added advantages over the older methods of setting show windows in wood or iron frames. These metal mouldings have been carefully designed to hold the sheets of plate glass in a resilient grip, which eliminates practically all of the danger of cracking and breaking, since it permits free vibration of the glass.

From the architect's point of view there are no definite standards of design established for metal and glass show windows, but the adaptability of this construction is such that the ingenious architect can readily design straight shop fronts in large glass areas or recessed fronts on almost every type of plan, while the entire front thus provided may be established as an attractive part of the exterior architecture of the building.

The purpose of this article is not to describe the technical details of metal and glass window construction, but to indicate the possibilities of plan and design from both the architectural and the equally important merchandising point of view to be achieved.



A Typical Shop Front Planned to Provide Increased Display Frontage on a Narrow Lot



## Typical Recessed Shop Fronts

The following pages illustrate many methods of planning shop fronts to meet the modern demand for increased display frontage combined with low maintenance costs and proper safeguarding of plate glass installations by being set in carefully designed metal mouldings.



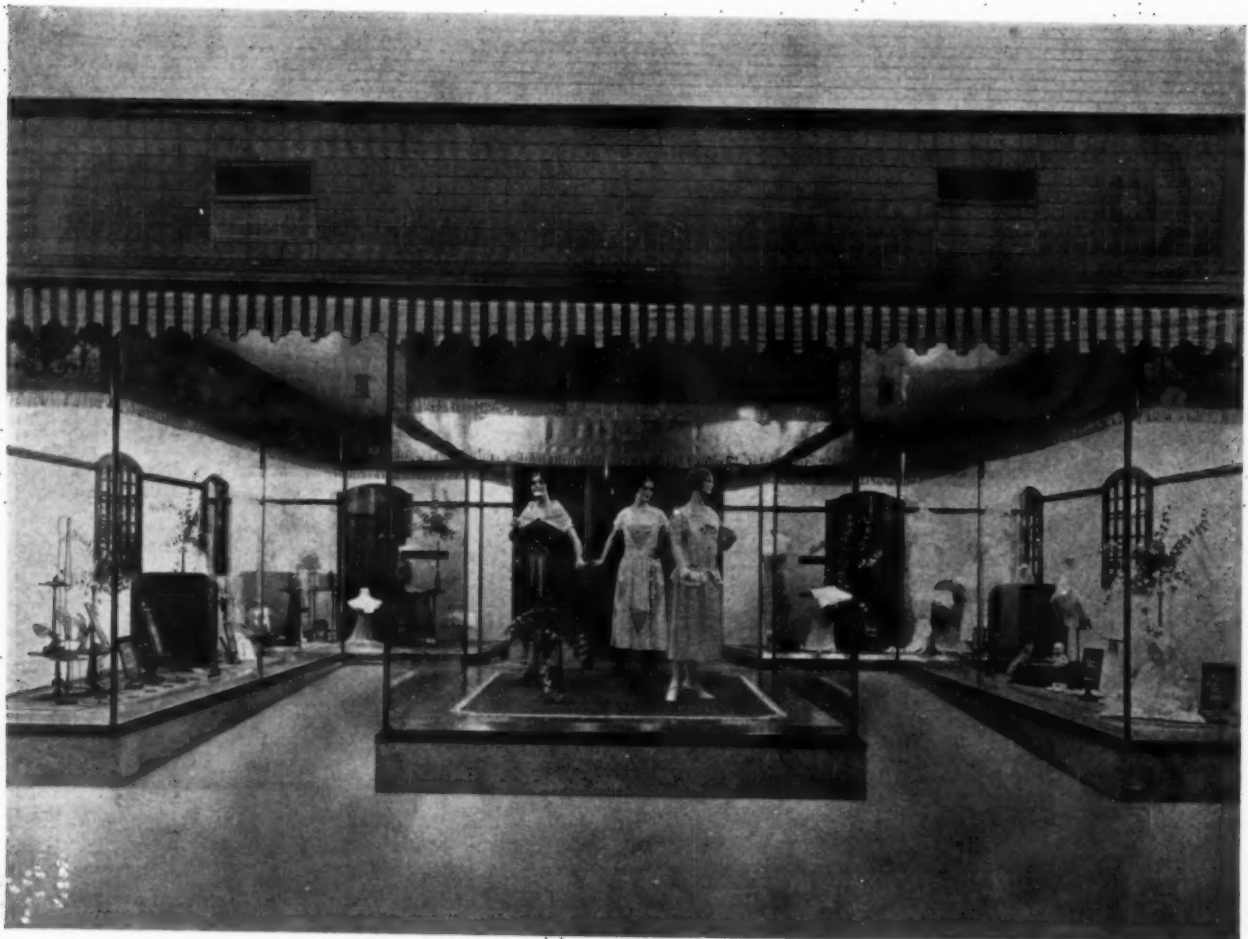
Arthur L. Kaufman Store, New Orleans; Weiss & Dreyfous, Architects



The Morrison Shop, Pittsburgh; Another Example of the Arcaded Type of Shop Front, Which Invites Passers-by to Step in from the Street and Examine Merchandise at Leisure

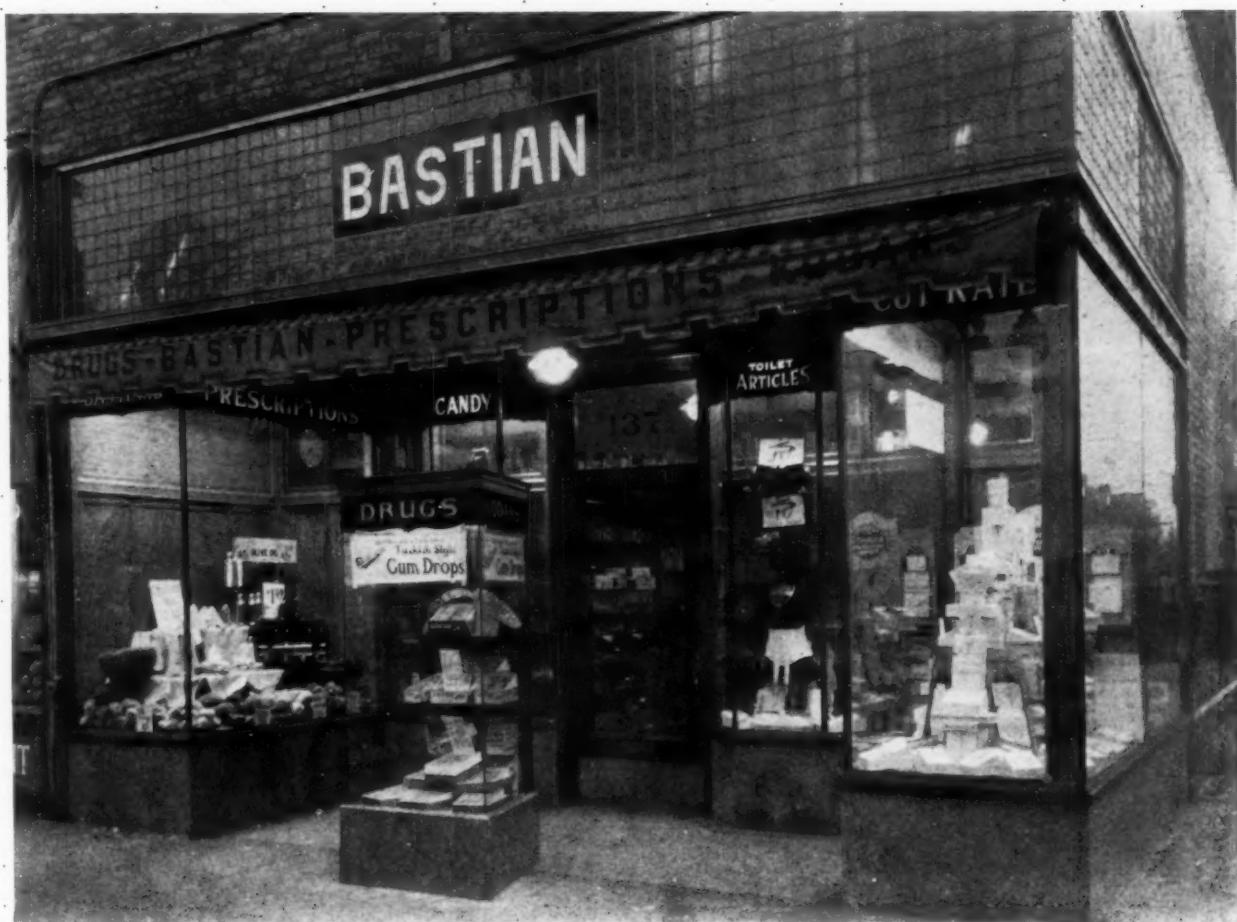


Examples of Recessed Shop Fronts with Island Display Cases

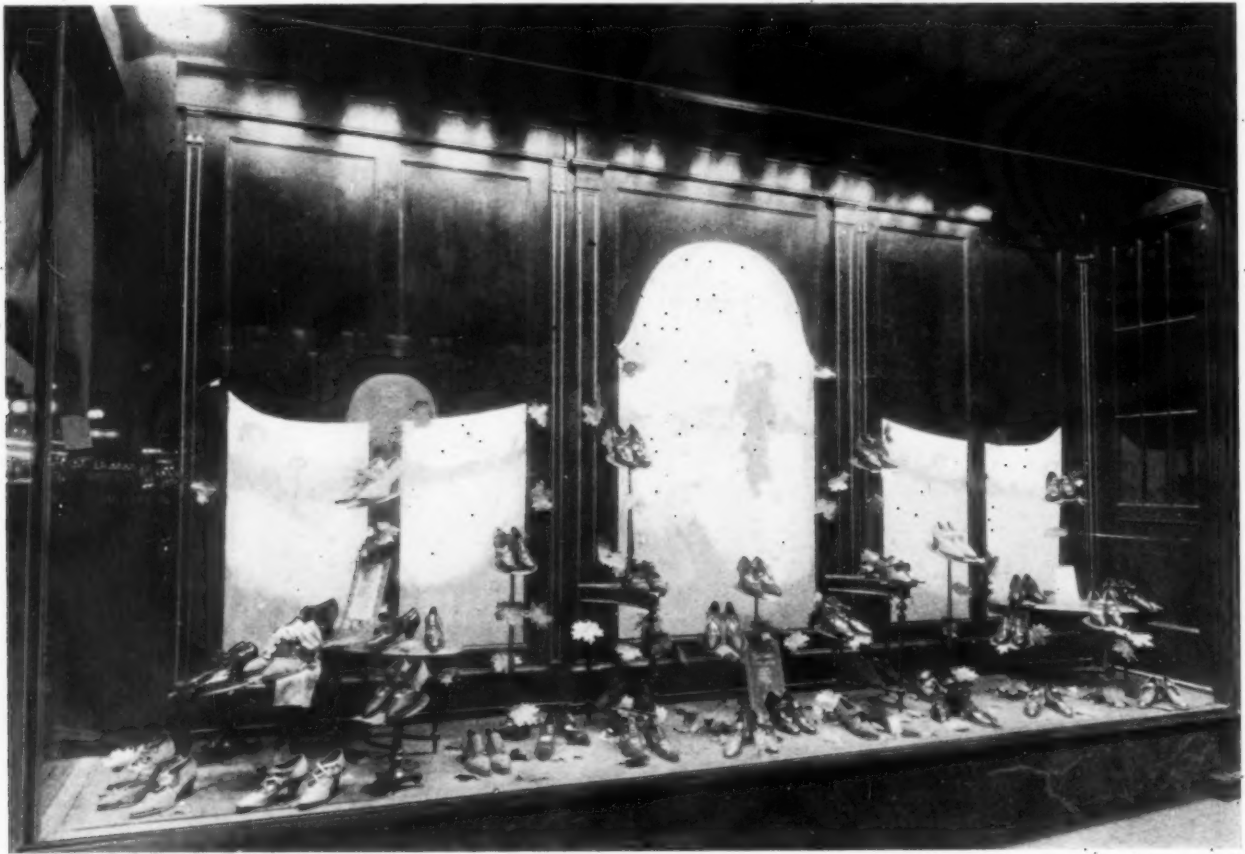




Island Display Show Windows for Wide and Narrow Frontages

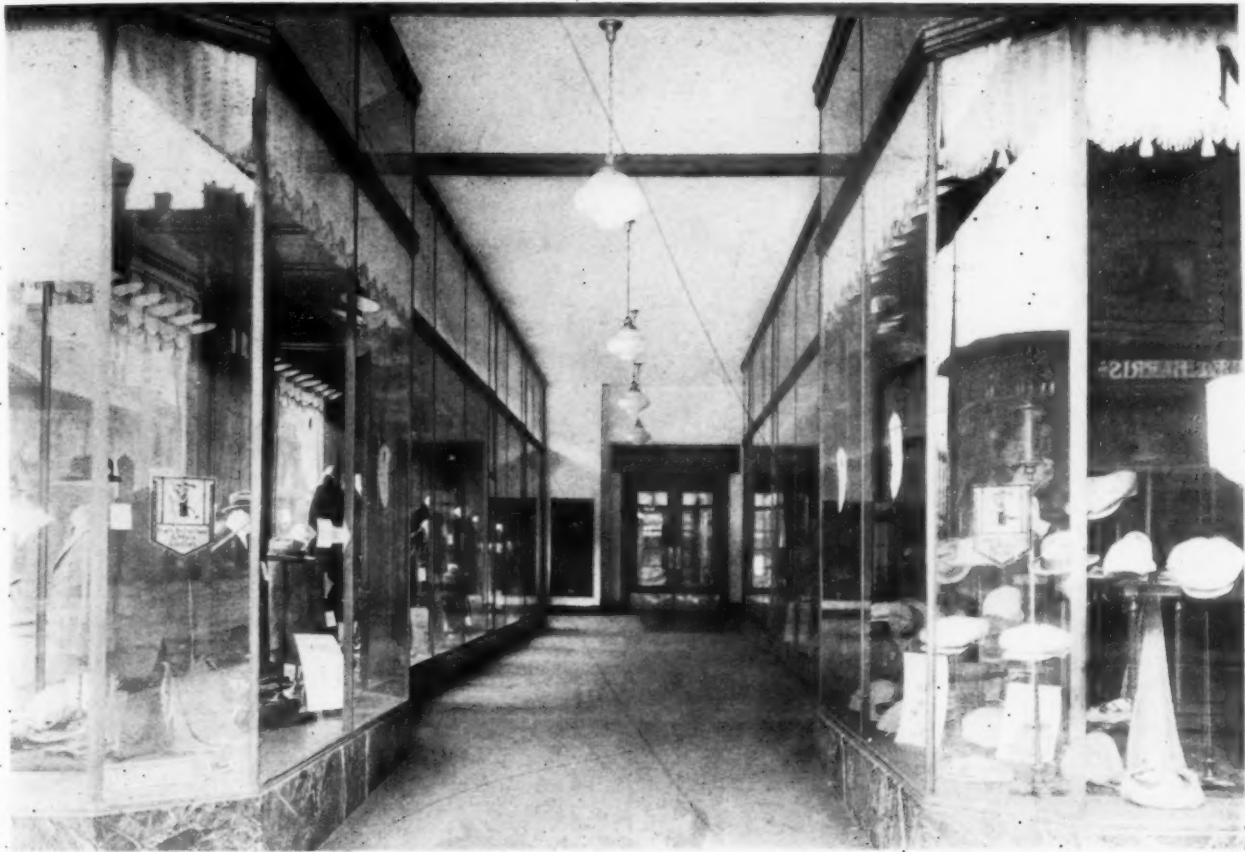




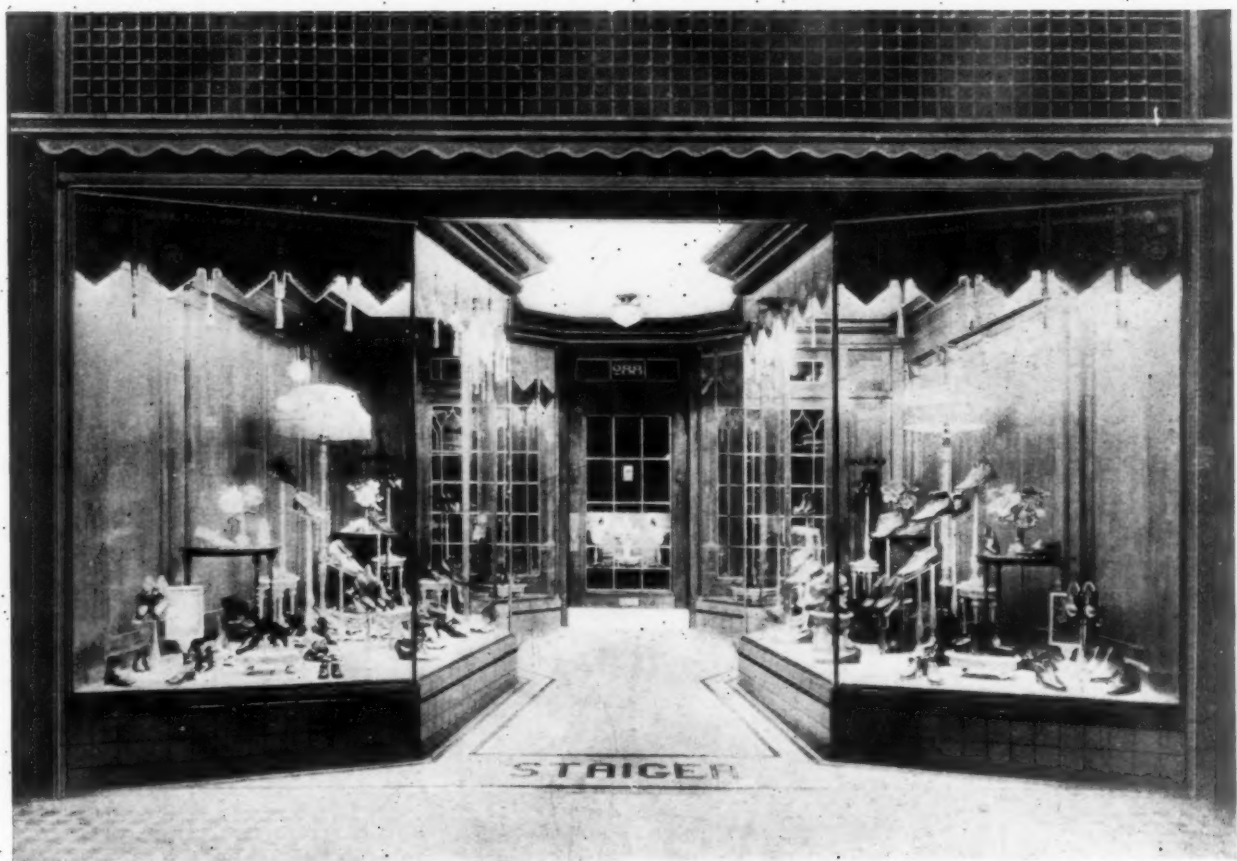


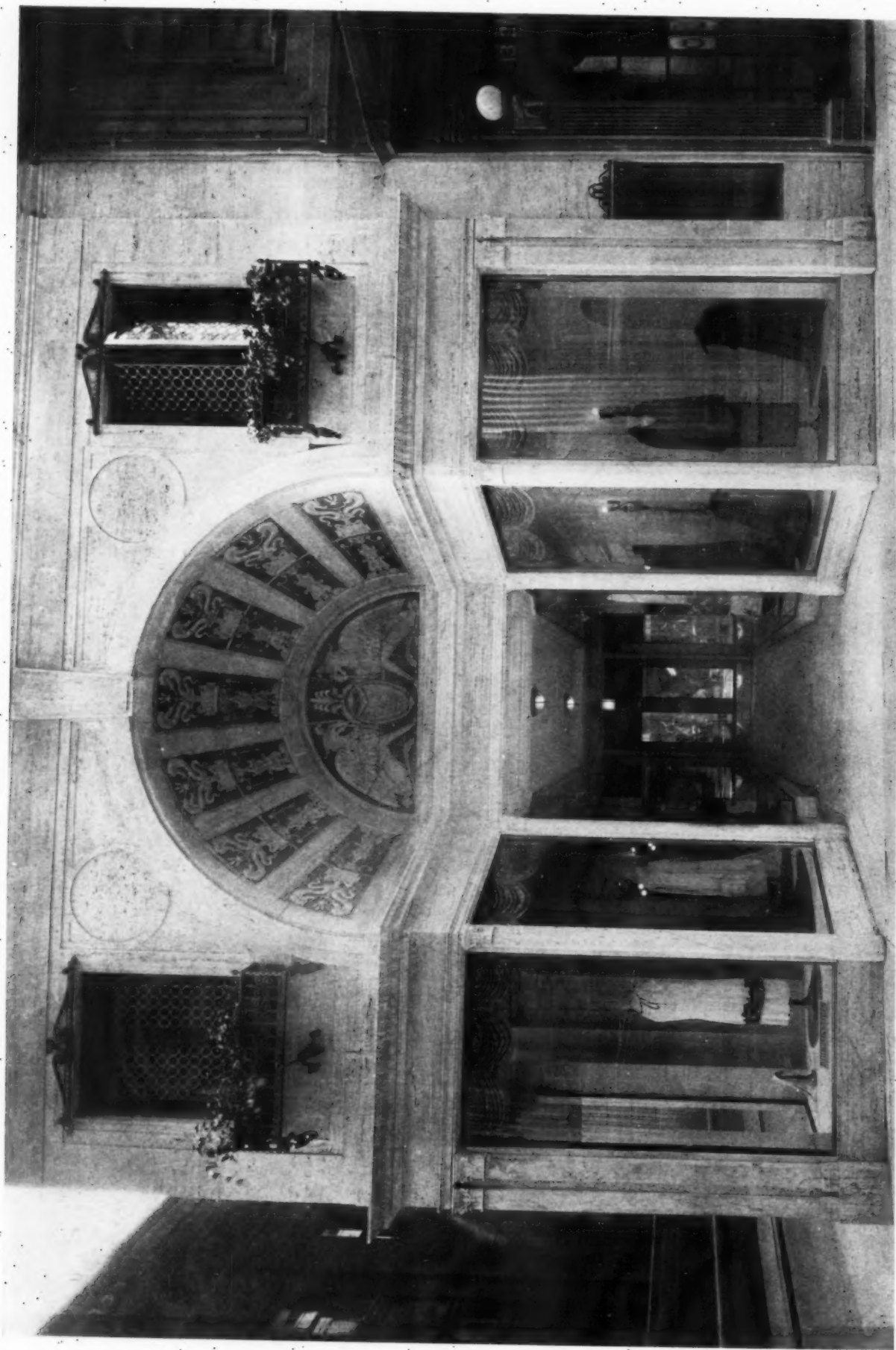
Metal Mouldings Safeguard the Setting of Large Sheets of Plate Glass





Deeply Arcaded Shop Fronts Provide for Extensive Window Displays

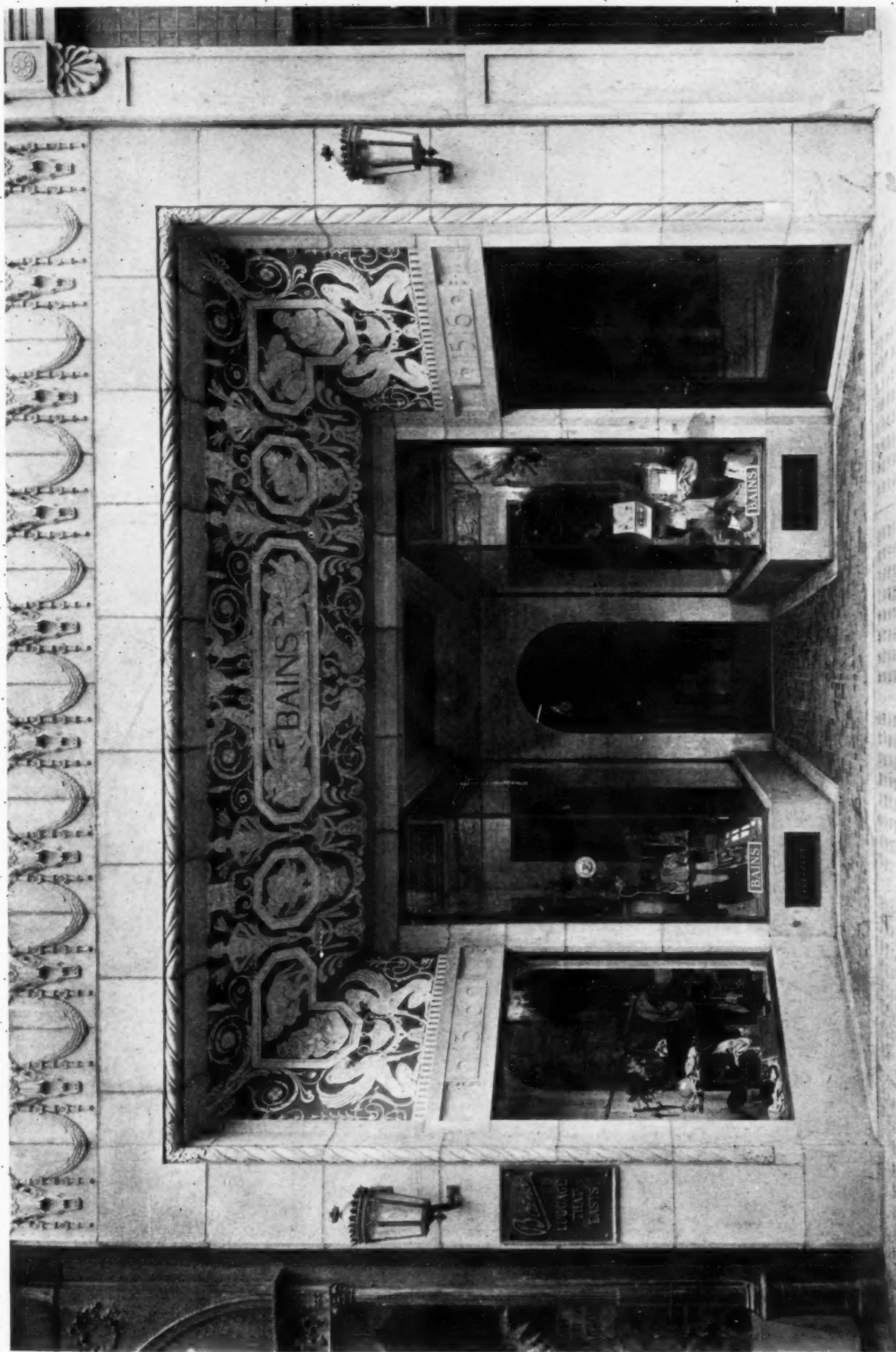




Photo, Paul Menzies, Studios

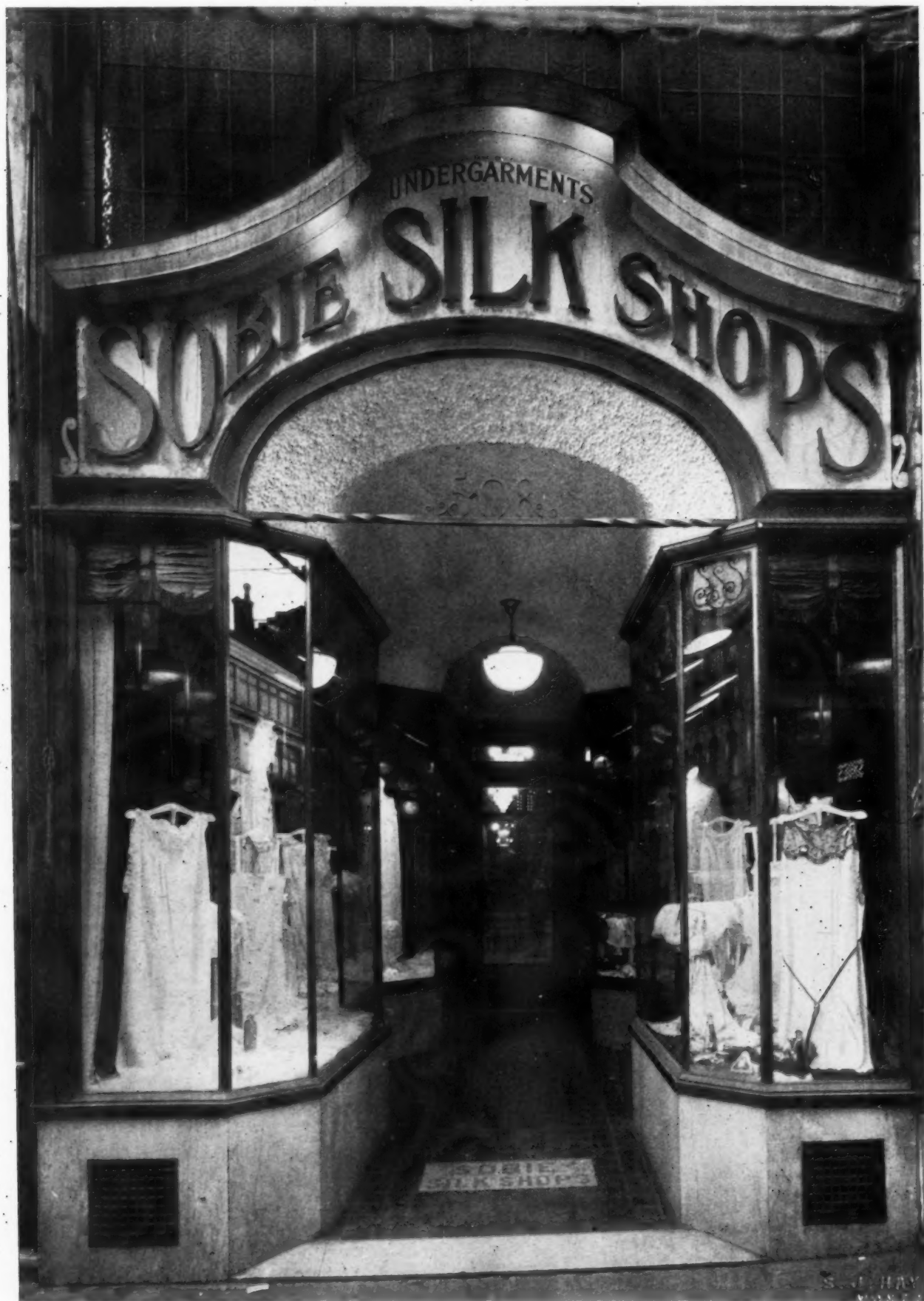
The Blum Store, Philadelphia  
Frank E. Hahn and S. Brian Baylinson, Architects





Photo, Paul Menzies Studios

Bains' Luggage Shop, Philadelphia  
Frank E. Hahn and S. Brian Baylinson, Architects



A Shop in Montreal. Huntly Ward Davis, Architect



The Shop of Darwins, Ltd., Montreal; Huntly Ward Davis, Architect

## TWO SHOPS IN MONTREAL

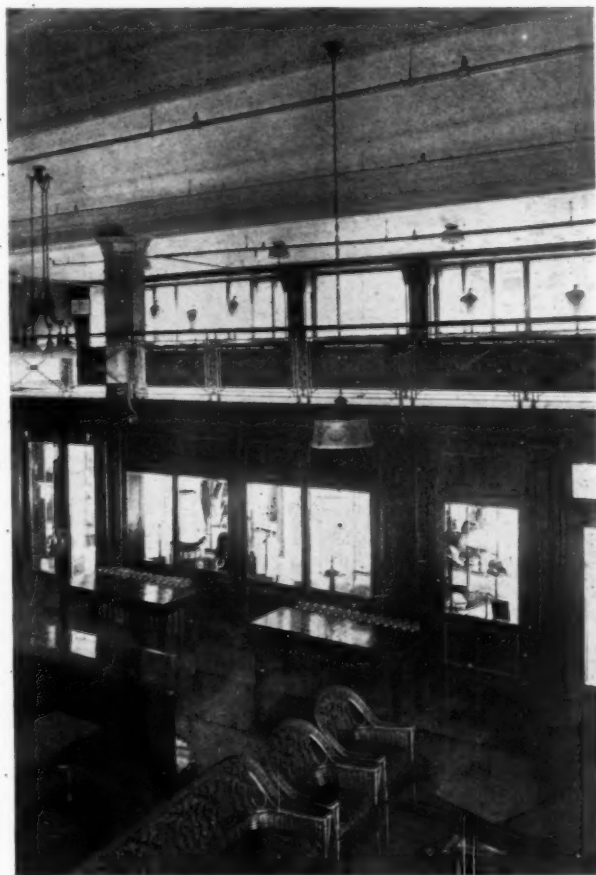
HUNTLY WARD DAVIS, Architect

THE interesting examples of shop front design in metal and glass shown on this and the opposite page indicate problems which very often arise in the field of small shop and store planning.

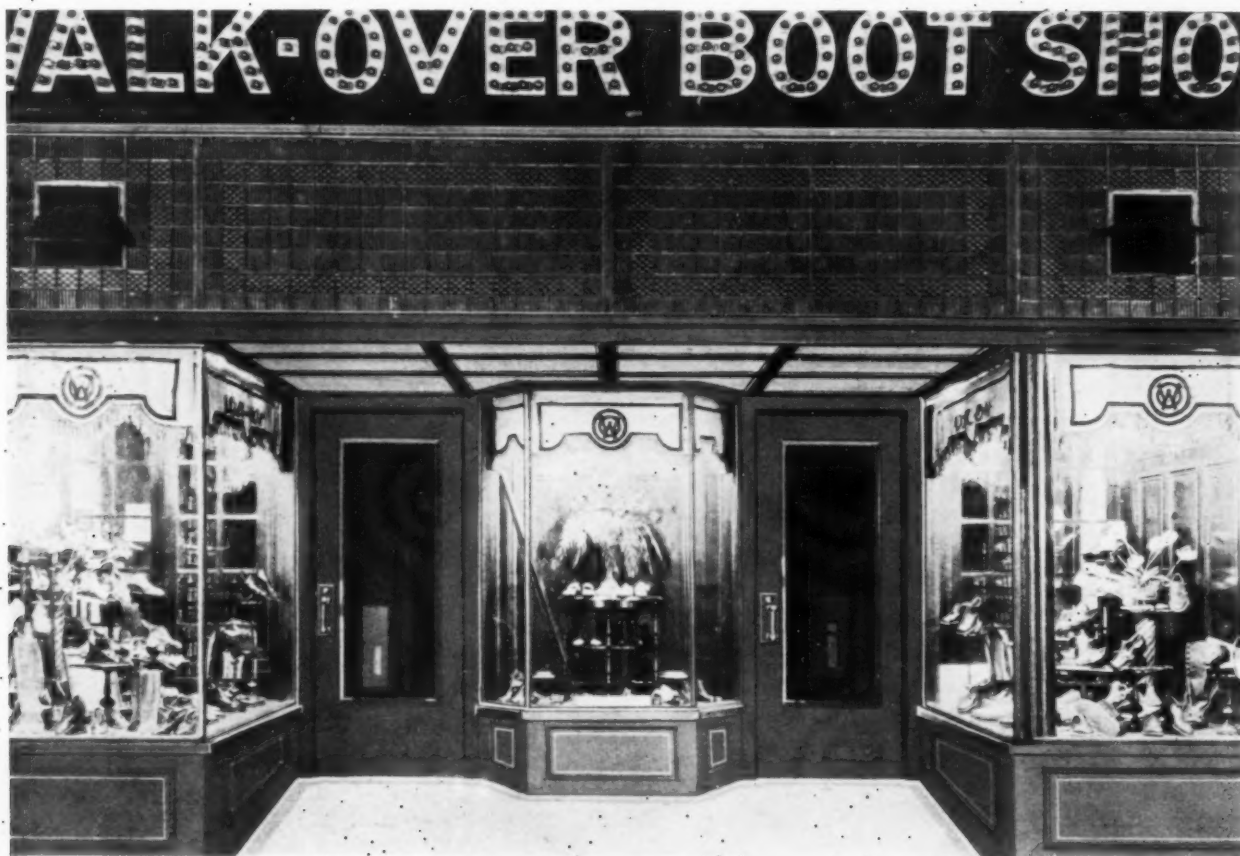
The problem of the Darwins store was to provide a mezzanine giving valuable floor space (see illustration at right) without making the deep entrance appear low. The outer bulkhead of the mezzanine was kept about 15 inches from the street line, and formed the upper part of the window with muffled glass in metal astragals. Over the doorways were placed semi-circular mirrors, giving the effect of a coved ceiling behind the semi-circular grilles. The apparent height of the ceiling over the windows and entrance, only 9 feet, 2 inches from the floor, was increased by painting white.

Ordinarily the solid background of a show window completely shuts off the daylight from the interior of a shop. In this instance the plan makes possible the entrance of daylight, besides making the window displays visible from inside as well as out.

In the Sobie Silk Shop there was a frontage of only 9 feet, 10 inches. A center entrance was provided, recessed 15 feet from the street line to the door, but a spacious effect was obtained by making this entrance 4 feet, 5 inches wide at the front and 3 feet, 1 inch at the back, narrowing gradually.



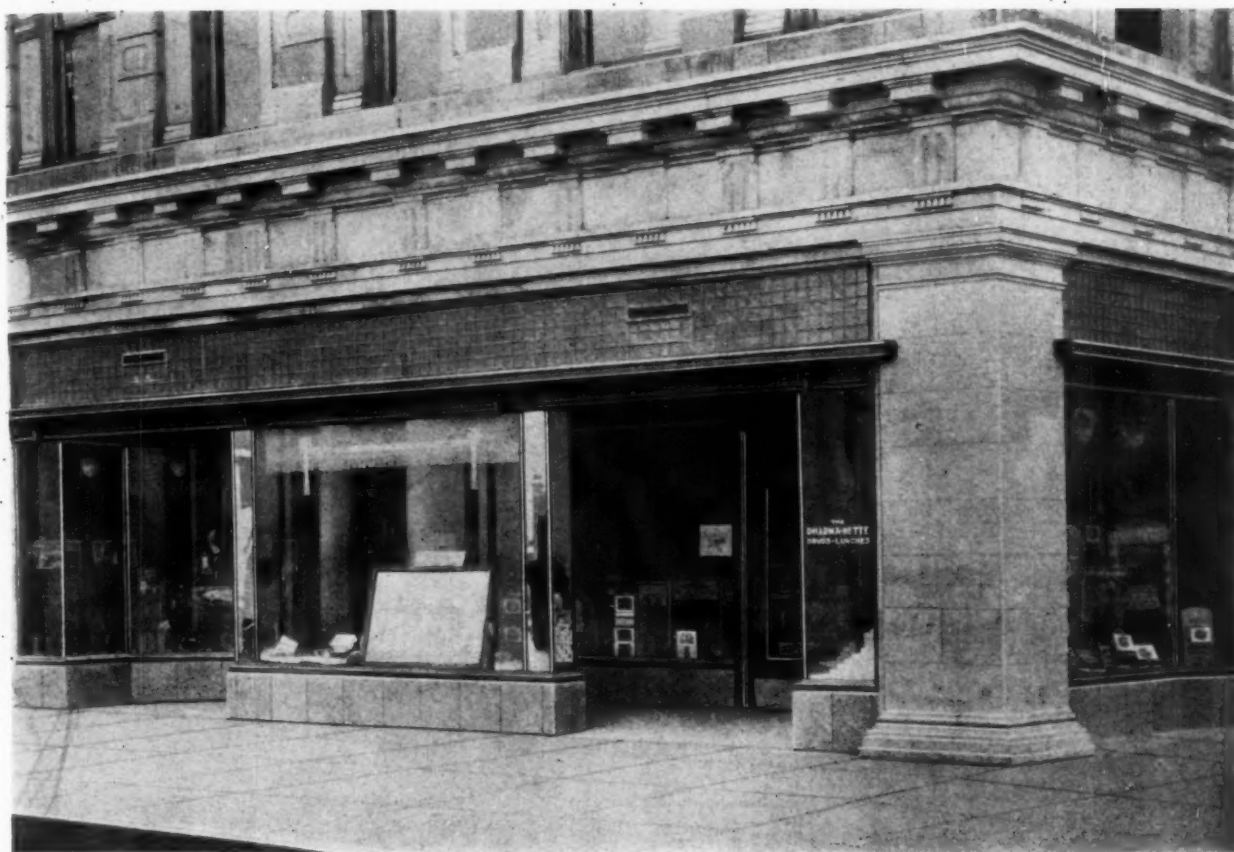




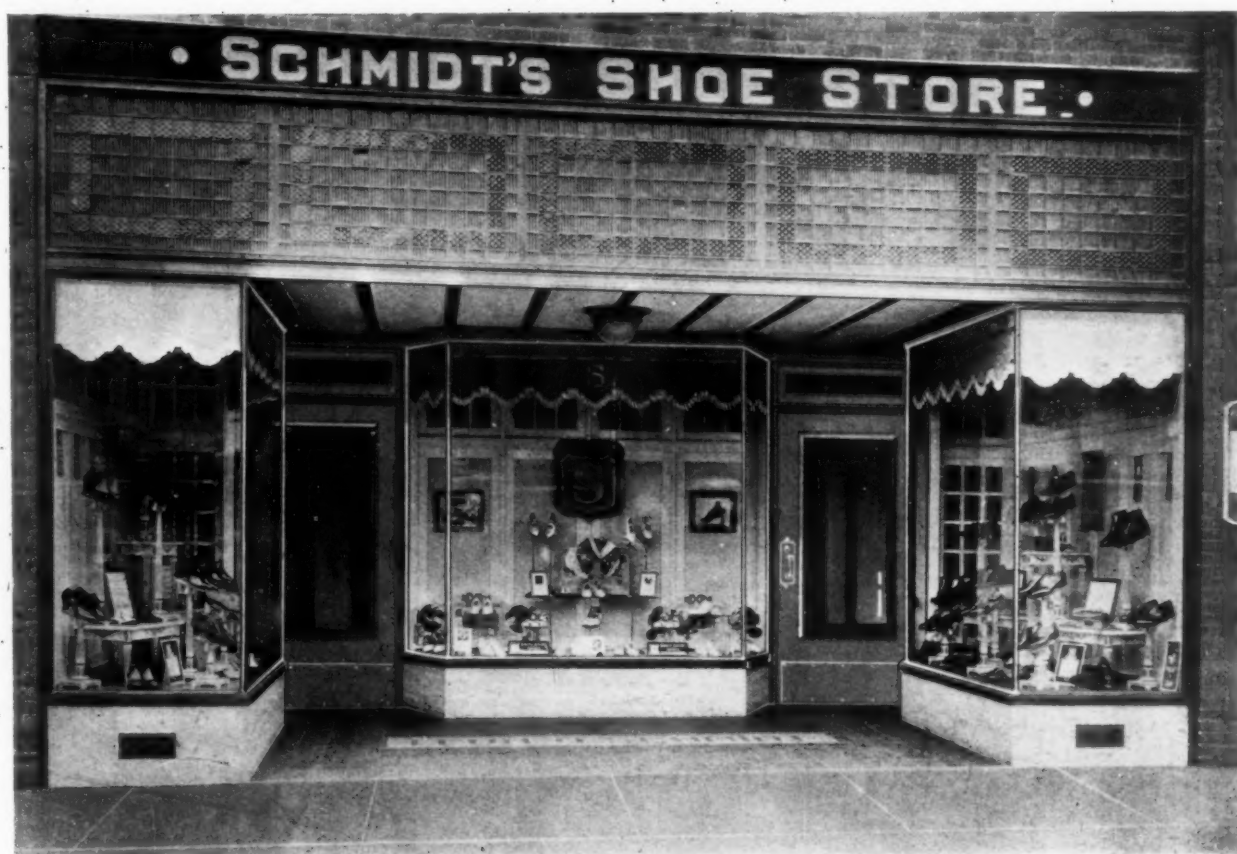
Shop with Full Display and Double Entrance, Madison, Wis.



Candy Shop, St. Louis. Preston J. Bradshaw, Architect



A Planning Method for Increasing Corner Display



A Treatment Where Two Entrances Are Required



Recessed Shop Fronts, Each with Two Entrances

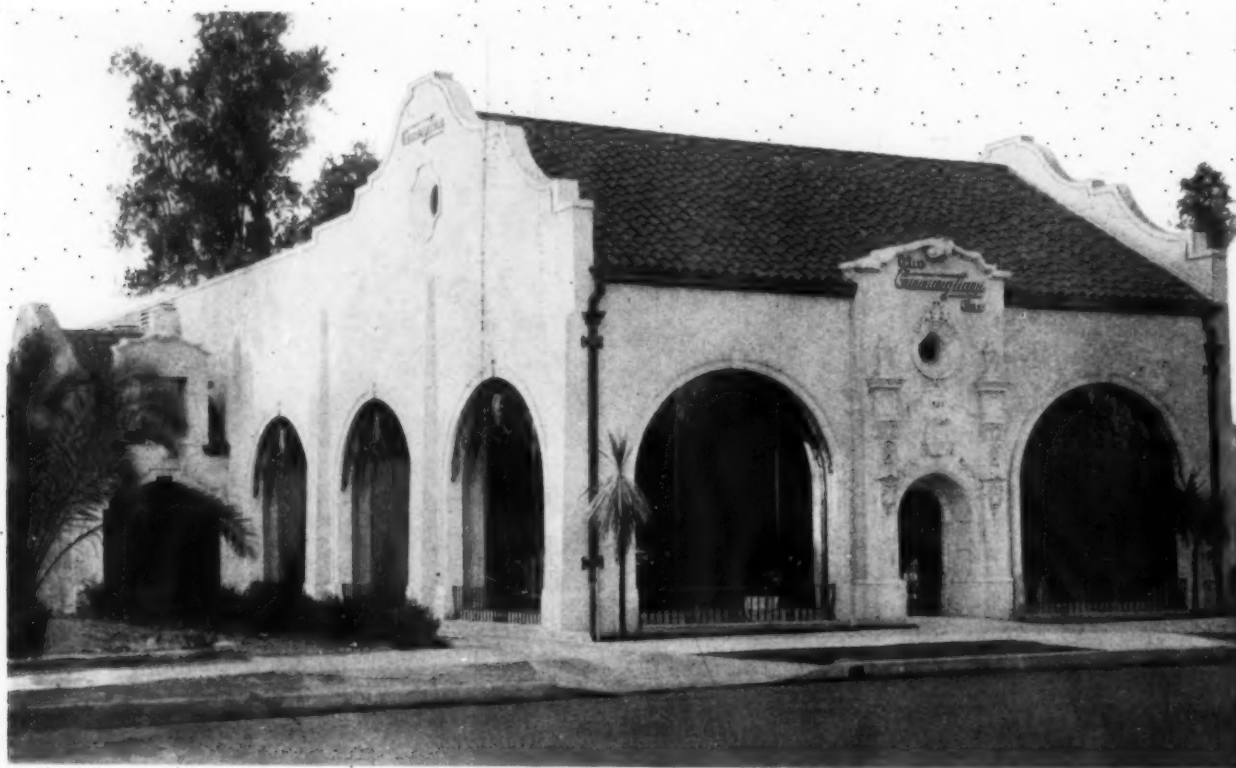




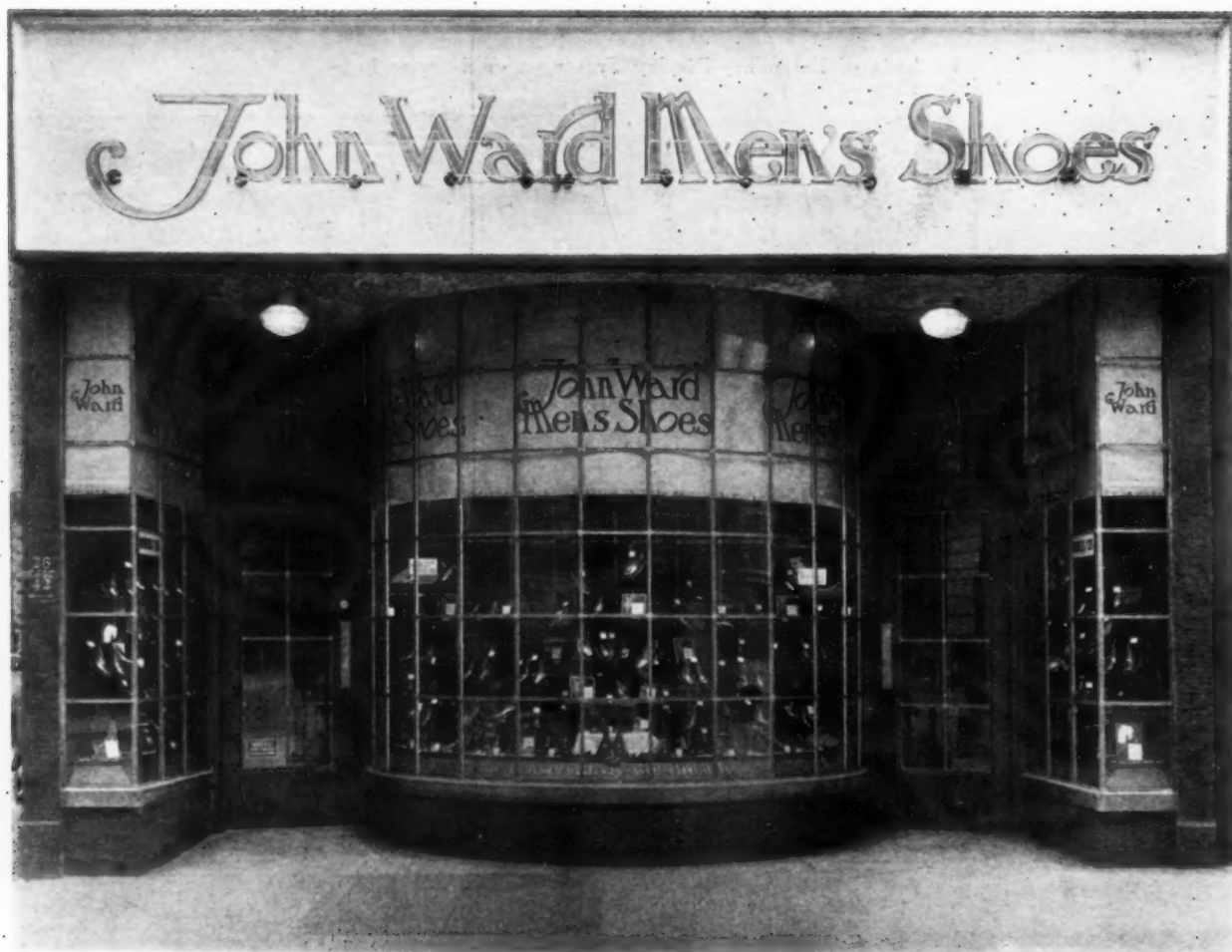


Methods of Extending Display Frontages on Narrow Lots





Cunningham Showroom, Los Angeles; Foss Designing Co., Architects



An Unusual Shop Front on East 42nd Street, New York.  
Richard Haviland Smythe, Architect

Photo, Sigfrid Fischer

# INTERIOR ARCHITECTURE

## Napoleon's Bedroom at Compiègne

By C. HAMILTON PRESTON

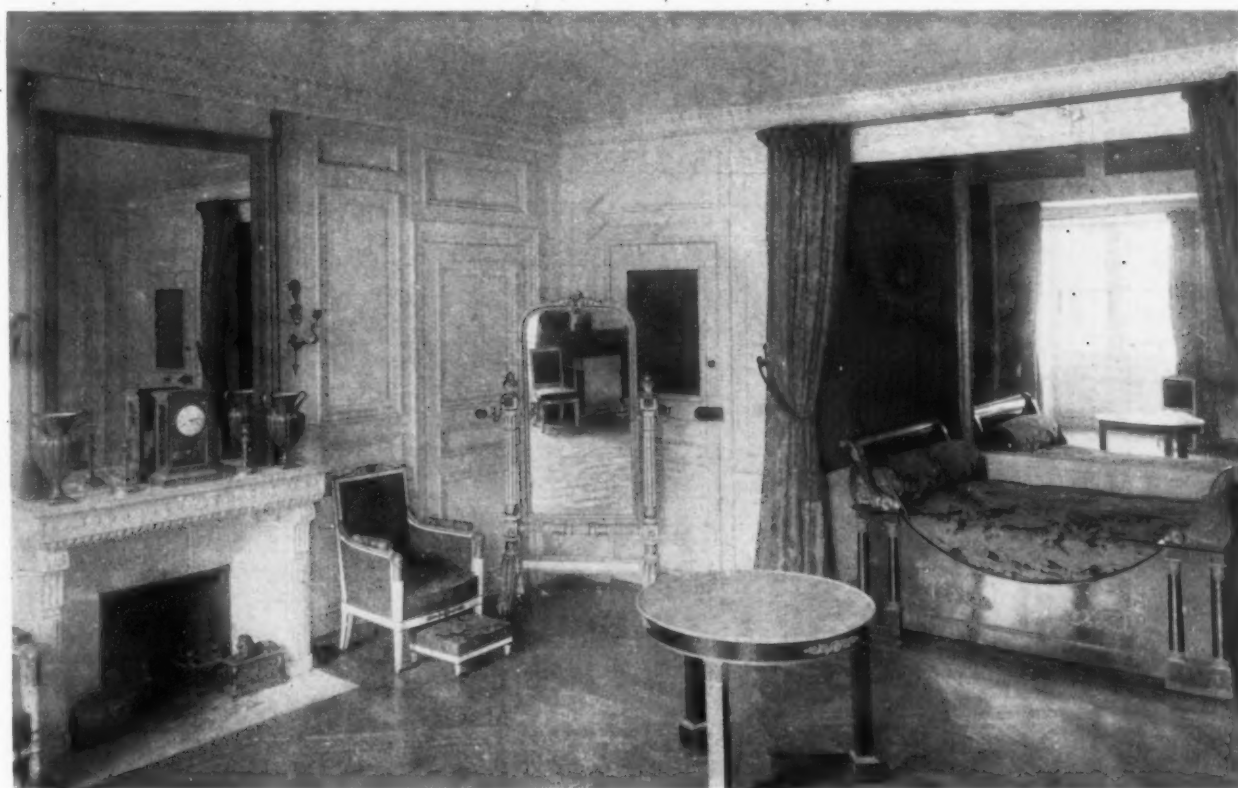
THE Palace of Compiègne, in which is found the subject of these pages, is situated about 60 miles from Paris, and from earliest times it vied with Versailles and Fontainebleau as a favorite residence of the various monarchs of France. The present palace was designed and built by the renowned Gabriel, under Louis XV, and the exterior is recognized immediately as the work of this master. In many details it recalls his two graceful palaces in the Place de la Concorde, in Paris.

The plan of the Palace of Compiègne is unusual, triangular in shape, and most skillfully worked out. The entrance presents a screen colonnade, very dignified in proportions, the entrance itself being marked by a motif with a segmental pediment. The massive iron gates of this entrance are of beautiful design and workmanship, and the large rectangular forecourt is impressive. On the entrance side the palace is three stories in height, while on the garden side it is of but two, formerly raised on a high stylobate.

Louis XVI fitted out a large suite of rooms on the garden side for Marie Antoinette, and the sub-

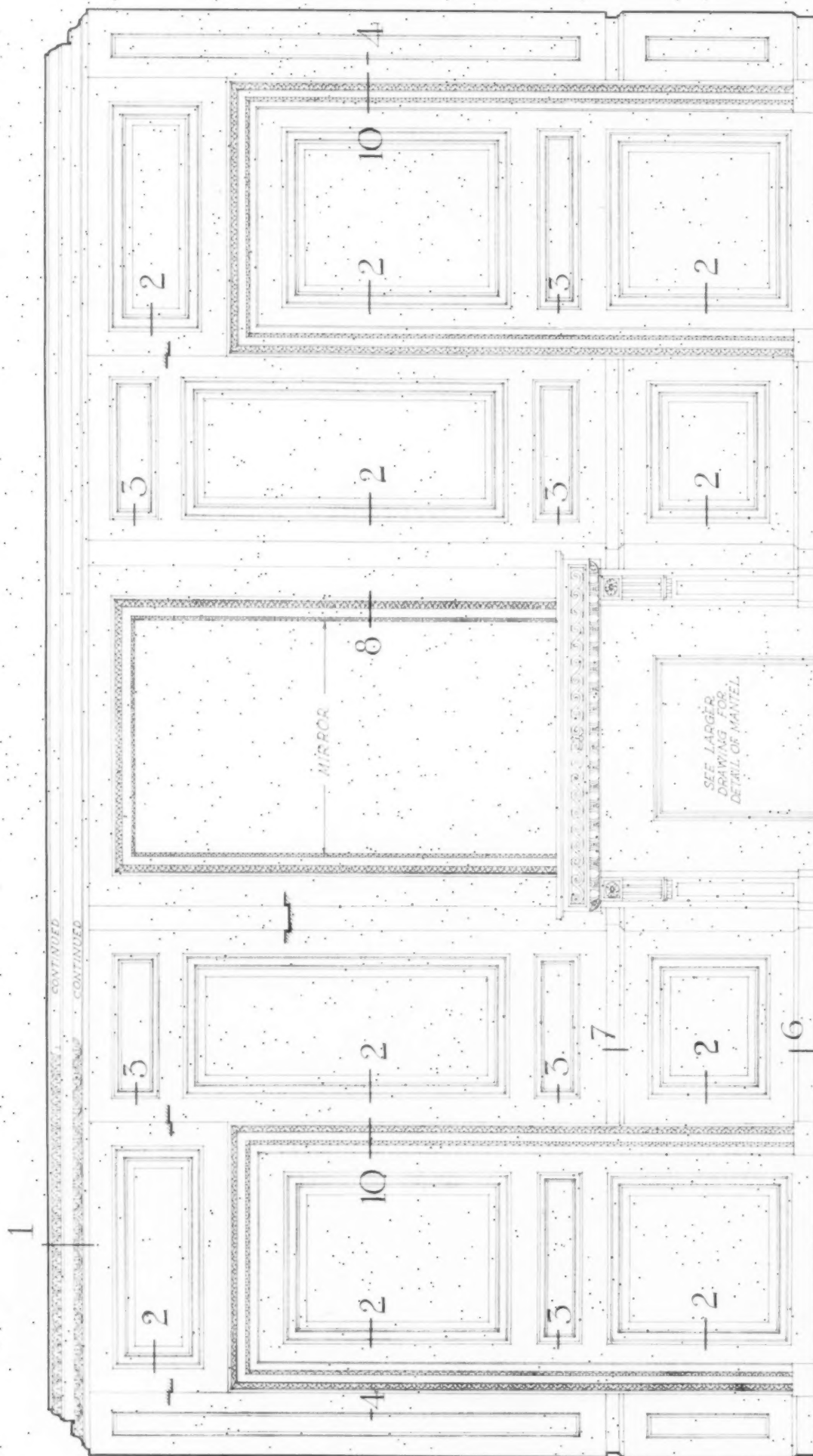
ject of these drawings is one of the intimate rooms of this suite; it is, in fact, the room next to the bedroom of the little Dauphin, which opened immediately into the boudoir of Marie Antoinette and the state apartments. It is a room of particular interest.

When Napoléon came to Compiègne he was charmed with this room and immediately selected it for his own bedroom, no changes being made in the architecture, but merely in the interior decorations. The room is spacious, but low and intimate. As regards design it is one of the loveliest of the smaller apartments. The mantel of pure white marble is exquisite in proportion and detail; it seemed to have been a favorite, and was reproduced in several other rooms in various colored marbles. On either side of the mantel are perfectly balanced doors and panels, admirably proportioned and very pleasing in effect. Above the mantel there is a superb mirror in a gold frame with interesting detail. The mouldings are bold and vigorous, and all the detail has that almost classic purity and refined dignity which seem peculiar to the Louis XVI work at Compiègne.



Napoleon's Bedroom at Compiègne; As It Appears Today





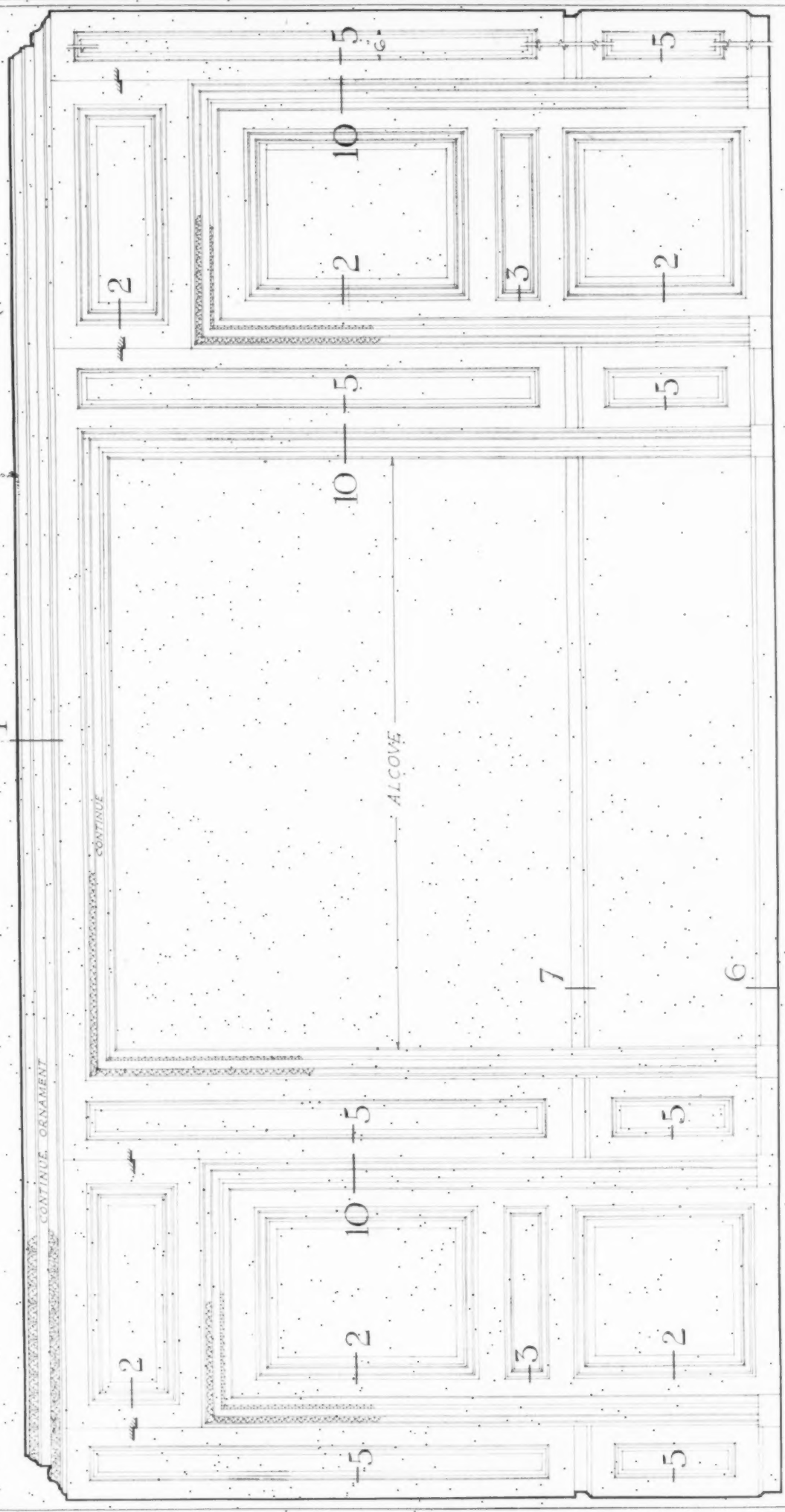
ELEVATION A~A  
 Scale  $\frac{1}{2} = 1 \text{ foot}$   
 NAPOLEON'S BEDROOM  
 COMPIEGNE

1

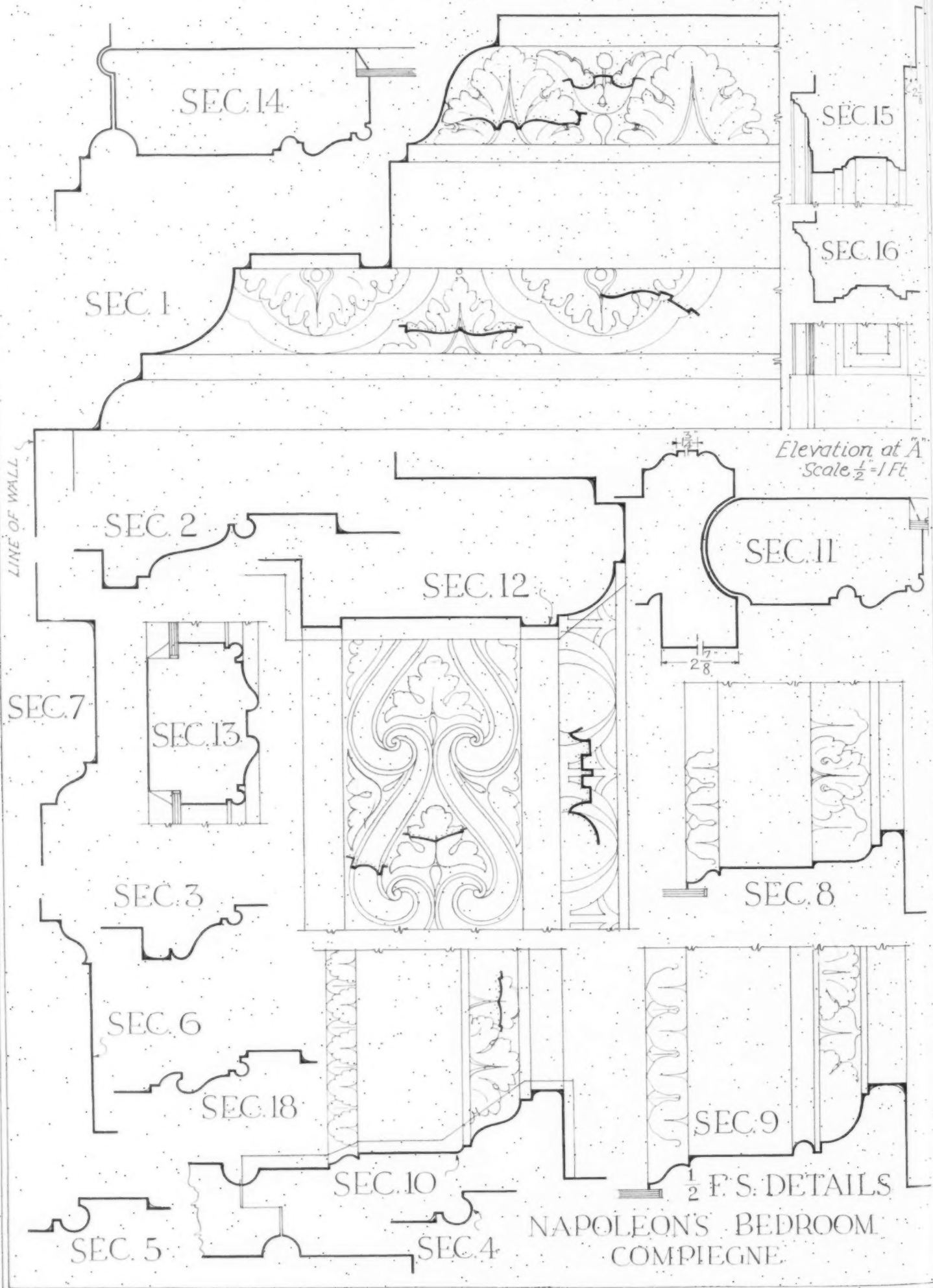
CONTINUE ORNAMENT

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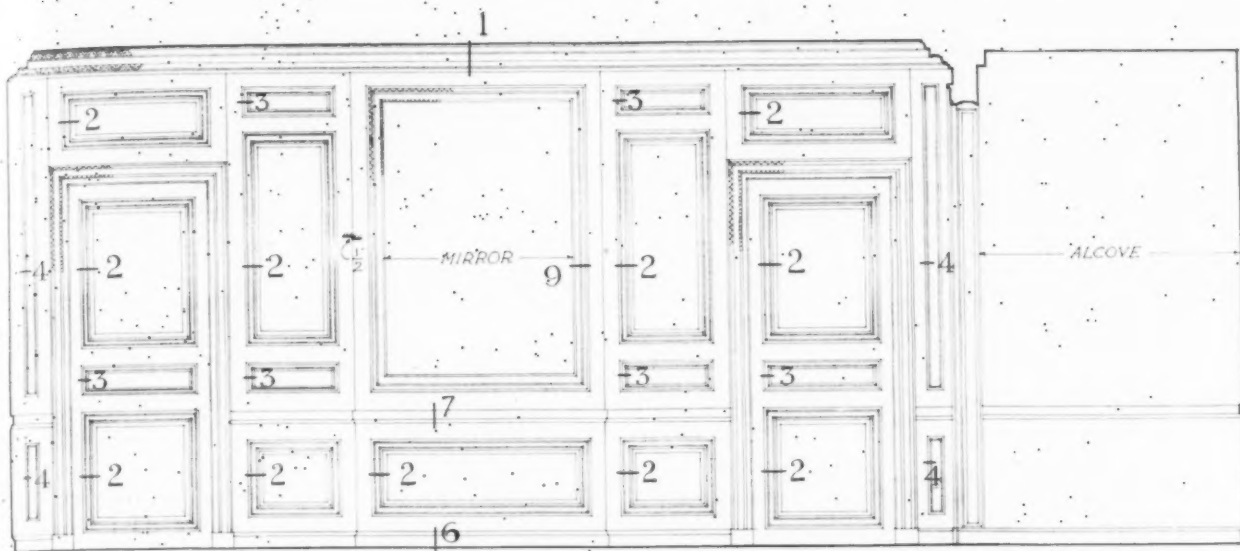
ALCOVE



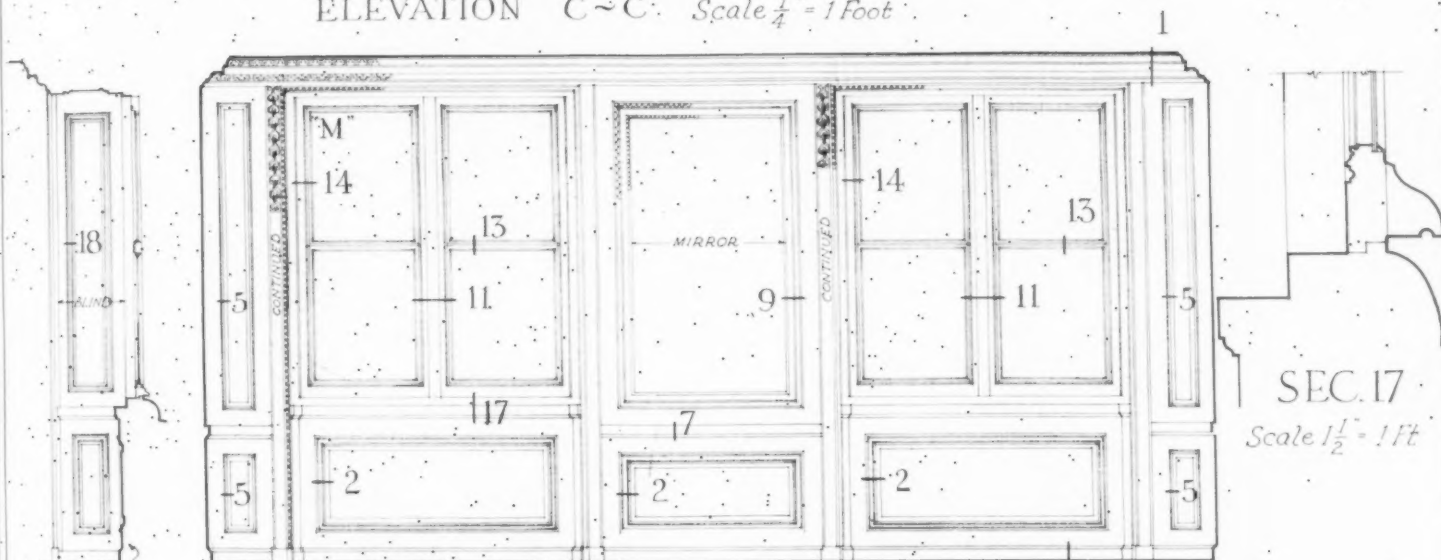
ELEVATION B~B  
*Scale  $\frac{1}{2} = 1$  foot*  
 NAPOLEON'S BEDROOM  
 COMPIEGNE







ELEVATION C~C Scale  $\frac{1}{4}'' = 1 \text{ Foot}$

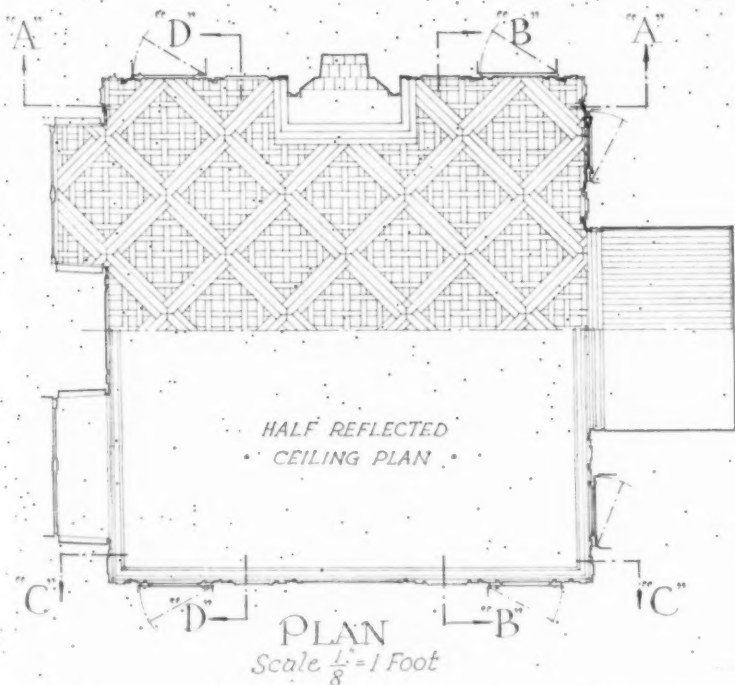


ELEVATION D~D

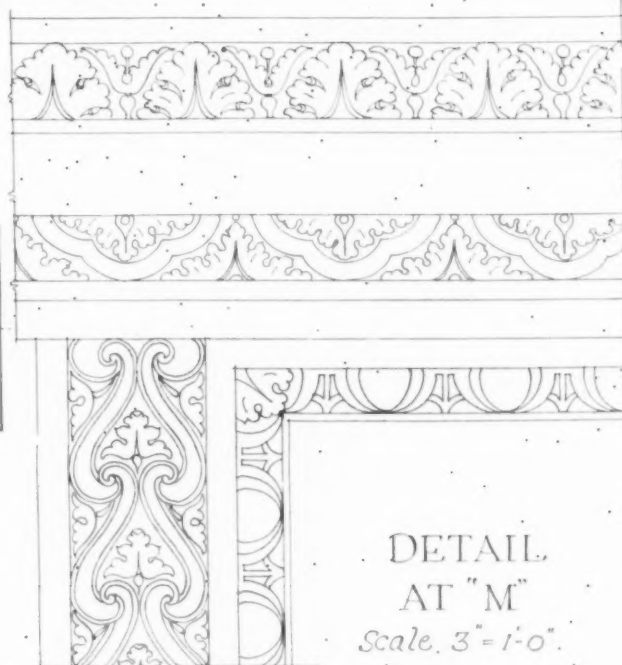
SECT. THRU WINDOW

SEC. 17

Scale  $1\frac{1}{2}'' = 1 \text{ Ft}$

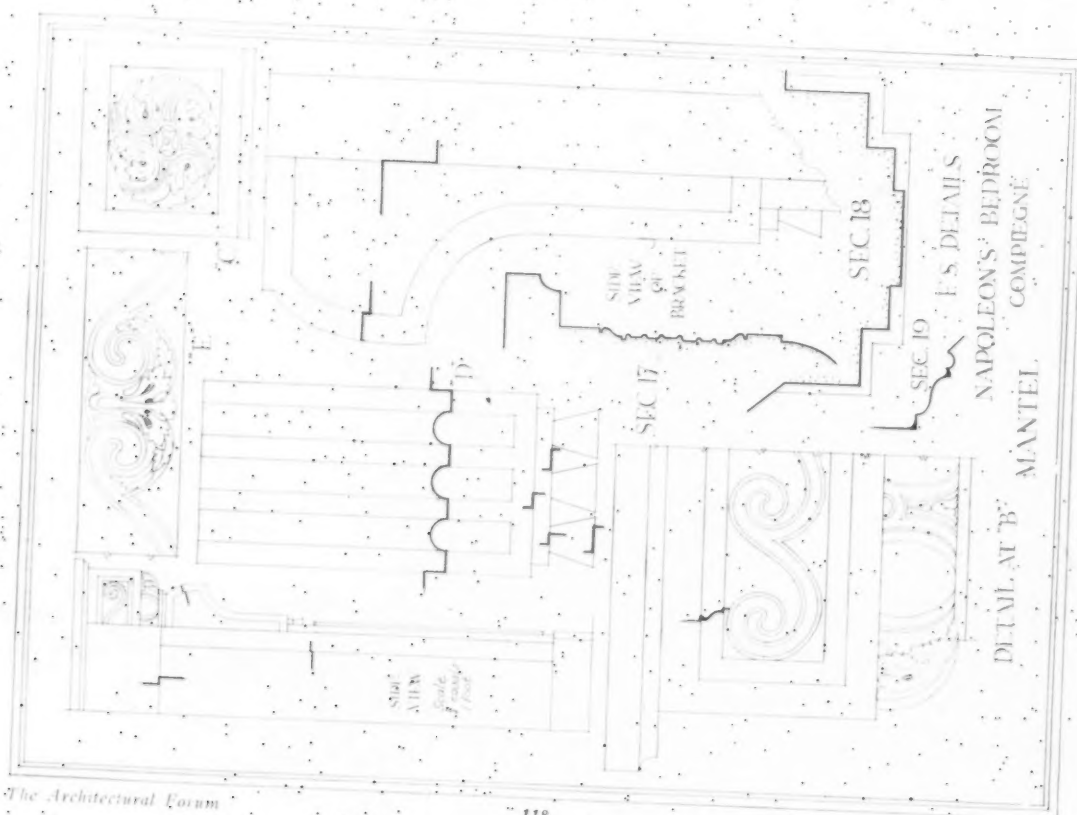


PLAN  
Scale  $\frac{1}{8}'' = 1 \text{ Foot}$



DETAIL  
AT "M"  
Scale  $3'' = 1'-0''$

# NAPOLEON'S BEDROOM COMPIEGNE



# DECORATION & FURNITURE

## Design and Craftsmanship in Early American Silver; Part II

By EDWIN J. HIPKISS

IN the May issue of THE ARCHITECTURAL FORUM there were given some notes regarding the work of certain early American silversmiths. As was then pointed out, there existed a definite relationship between the design of furniture of the different colonial periods and the design of the domestic silver of the same eras, both furniture and silver exhibiting a constant tendency toward sophistication and refinement, with a consequent loss of virility. These notes are added to aid the student in the study of the work of colonial silversmiths, and the illustrations show the effect of constant development in the design of silver and furniture, and also



American Silver, Made about the Middle of the Eighteenth Century

in the interior architecture which supplied an appropriate background for the use of both.

*Engraving.* Many of the silversmiths engraved their work with a knowing sense of style. In many plates and bowls of the utmost simplicity it is interesting to see how the engraved inscription has been managed to form effective decoration. Some of the best of such engraving is upon different objects of silver bearing the marks of William Swan (1715-1774) and of Jacob Hurd (1702-1758). Nathaniel Hurd, the son of Jacob, was not only a very skillful worker of "plate," but also designed and engraved many bookplates now eagerly sought by collectors of Americana. One



American Chair in the Style of Chippendale



Woodwork in the Jeremiah Lee Mansion, Built in 1768



among many of his engravings was a bookplate for Harvard College.

*Chasing* is a method of enriching plain surfaces by means other than engraving. The process is to chase or work a design into the metal with hammer and tools shaped like chisels but lacking the cutting edges. A hollow piece, such as a cup, a bowl or a tankard, was filled with hot pitch, and when this had cooled it formed a solid, resistant body against which punch marks or lines could be struck in with hammer and tools without punching through the walls of the piece or changing its shape. Engraving differs from this in that it consists of cut lines ploughed through the surface of the metal with a sharp graver. Use of chasing is characteristic of seventeenth century silver; both chasing and engraving were used about the middle of the eighteenth century, while later objects were enriched quite generally with engraving only, which nevertheless gave a rich effect.

*Historic American Silver.* Two extremely interesting examples of American silver, probably unmatched for historic interest, are a punch bowl made by Paul Revere (1735-1818) and an inkstand by Philip Syng (1703-1789), of Philadelphia. The bowl was made in commemoration of the vote in



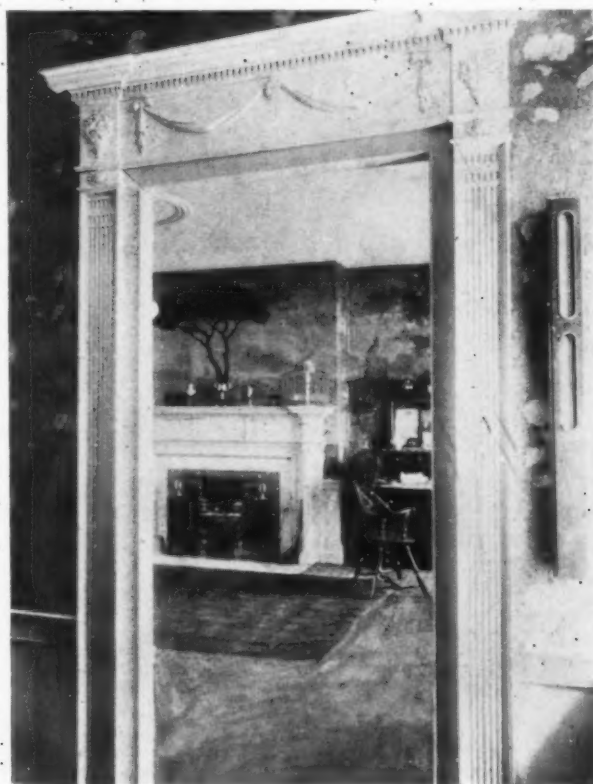
American Silver, Made Toward the End of the Eighteenth Century

excitement and much celebration in the colonies. The bowl is inscribed with the names of the "Sons of Liberty" who commissioned Paul Revere to make it. The second object, the inkstand made by Philip Syng, is now preserved in Independence Hall. Philip Syng was a silversmith of distinction, a respected citizen, and a friend of Franklin. It seems probable that this silversmith was unaware of the significance that an example of his handiwork would have for future generations of Americans, but out of his inkstand were written into American history, by signature, the Declaration of Independence and the national Constitution.

*Church Silver.* Our older churches were the possessors of much fine silver; there were flagons, tankards, basins, beakers, etc., some of which have been destroyed either by accidental fire or by the fire of the melting pot. Much American silver was undoubtedly carried away by the departing Loyalists.



American Chair in the Style of Hepplewhite



Door Trim in the Cook-Oliver House, Salem